ST-D777ES

SERVICE MANUAL

AEP Model
UK Model

SPECIFICATIONS

DAB tuner section

Frequency range	174.928 (5A) - 239.200 (13F) MHz 1452.960 (L1) - 1490.624 (L23) MHz
Sensitivity	6.9 µV/28 dBf
Signal-to-noise ratio	100 dB
THD+N	0.005 % (1 kHz)
Channel separation	90 dB (1 kHz)
Selectivity	35 dB (at adjacent channel)
Frequency response	+0.2/-0.3 dB (5 Hz - 20 kHz)
DA converter	Pulse D/A S-TACT128
Digital filter	VC24 (only for DAB analog output)
Digital output	Terminals: Coaxial and Optical Sampling frequncy: 48 kHz
RDI output	Optical
Aerial terminal	75 Ω, F female

FM tuner section

Frequency range	87.5 - 108.0 MHz
Sensitivity	at 40 kHz derivation at 26 dB quieting (mono) 0.9 µV/10.3 dBf at 46 dB quieting (stereo) 23 µV/38.5 dBf
Signal-to-noise ratio	at 40 kHz derivation 80 dB (mono), 76 dB (stereo)
THD+N	1 kHz, 40 kHz derivation WIDE 0.035 % (mono), 0.045 % (stereo)
Channel separation	50 dB (1 kHz) WIDE
Selectivity	at 400 kHz WIDE 85 dB NARROW 90 dB
Frequency respose	+0.2/-0.3 dB (30 Hz - 15 kHz)
Aerial terminal	75Ω, IEC male

AM tuner section

Frequency range	MW: 522 - 1,611 kHz (9 kHz step) LW: 144 - 288 kHz (1 kHz step: Manual tuning) (3 kHz step: Automatic tuning)
Sensitivity	(with AM loop aerial) MW: 200 µV/m LW: 700 µV/m
Signal-to-noise ratio	MW: 54 dB (50 mV/m, 999 kHz) LW: 50 dB (50 mV/m, 216 kHz)
Harmonic distortion	0.3 %
Sensitivity	50 dB
Aerial terminal	Push lever

General

Power requirements	230 V, AC 50/60 Hz
Power consumption	20 W
Dimensions	430 × 97.5 × 374 mm (w/h/d)
Weight	6.2 kg
Remote control capability	IR
Station preset capacity	max. 99 (DAB, FM and AM total)
Supplied accessories	• Audio cord (1) • AM loop aerial (1) • FM wire aerial (1) • DAB wire aerial (1) • Remote commander (1) • R6 (size AA) baatteries (2)

Design and specifications are subject to change without notice.

DAB/FM/AM TUNER

SONY®

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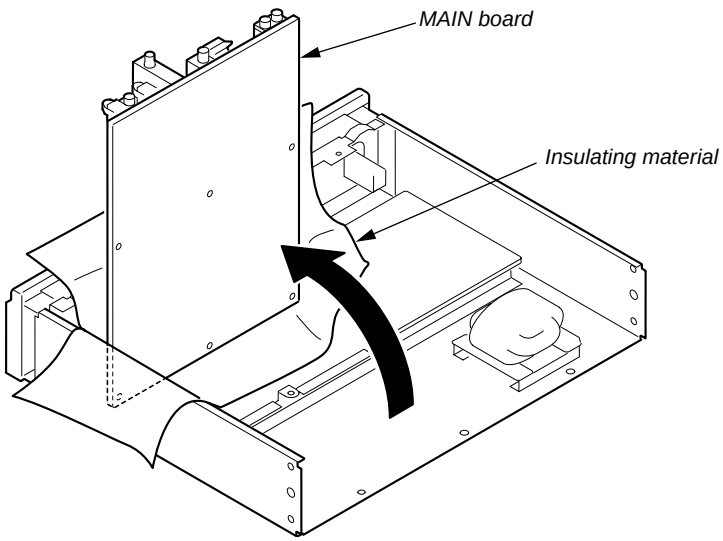
SERVICE POSITION

• The service position of the MAIN board is the state in which the back-panel is removed and the MAIN board is swing-raised by 90 °.
(An insulating material is necessary to prevent the machine from shorting.)



SAFETY-RELATED COMPONENT WARNING!!

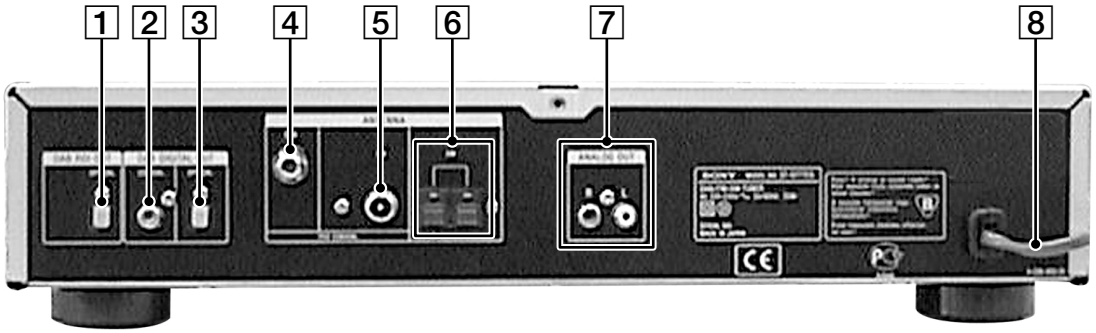
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

FRONT PANEL

1 I/⏻ switch
2 DAB button
3 FM button
4 AM button
5 TUNING MODE button
6 PTY button
7 TUNING/SELECT button
8 MENU button
9 ENTER button
10 MEMORY button
11 CHARACTER button
12 MONO/SC button
13 DISPLAY MODE button
14 EON button
15 DISPLAY button

REAR PANEL



1 DAB RDI OUT OPTICAL jack
2 DAB DIGITAL OUT COAXIAL jack
3 DAB DIGITAL OUT OPTICAL jack
4 ANTENNA DAB jack
5 ANTENNA FM jack
6 ANTENNA AM terminal
7 ANALOG OUT jack
8 POWER cord

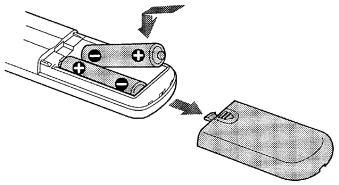
Unpacking

Check that you received the following items with the tuner:

- Audio cord (1)
- AM loop aerial (1)
- FM wire aerial (1)
- DAB wire aerial (1)
- Remote commander (1)
- R6 (size AA) batteries (2)

Inserting batteries into the remote

You can control this unit using the supplied remote. Insert two R6 (size AA) batteries by matching the + and – on the batteries. When using the remote, point it at the remote sensor ▣ on this unit.



When replace batteries

With normal use, the batteries should last for about six months. When the remote no longer operates the tuner, replace all the batteries with new ones.

Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not drop any foreign object into the remote casing, particularly when replacing the batteries.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you will not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

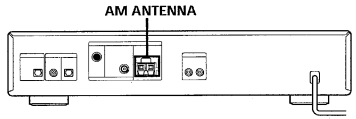
Hooking Up the System

Before you get started

- Turn off the power to all components before making any connections.
- Do not connect the mains lead until all of the connections are completed.
- Be sure to make connections firmly to avoid hum and noise.
- When connecting an audio cord, be sure to match the colour-coded pins to the appropriate jacks: White (left) to White; and Red (right) to Red.

AM aerial hookups

This section describes how to connect the supplied AM loop aerial. For the specific location of the AM ANTENNA terminals, see the illustration below.

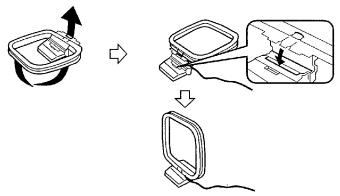


What will I need?

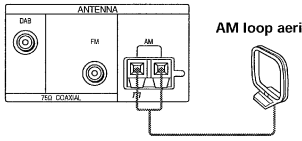
- AM loop aerial (supplied) (1)

1 Unwrap 2 lengths of the braided lead wire from around the frame of the aerial. Be careful to unwrap only the braided section of the lead wire. Do not unwrap more than 2 lengths of the lead wire. Also, be careful not to unbraid the lead wire.

2 Assemble the supplied aerial as shown below.



3 Connect the AM loop aerial to the AM terminals on the back of this unit.



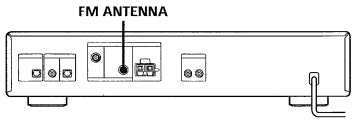
4 Adjust the aerial direction for the best reception. The AM loop aerial has a directivity which detects the signal from some angles more strongly than others. Set the aerial to the orientation which provides the best receiving condition.
If a high pitched noise (beat noise) occurs when recording AM broadcasts, adjust the position of the AM loop aerial so that the noise disappears.
If you live in a building constructed of reinforced concrete, or with a steel frame, you may not be able to achieve good reception since the radio waves become weaker indoors. In this case, we recommend connecting an optional aerial.

For stations that are difficult to receive

Try repositioning the loop aerial while tuning. Placing the supplied AM loop aerial near a window will help improve reception quality.

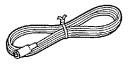
FM aerial hookups

With an FM outdoor aerial, you can obtain a higher FM broadcast sound quality. We recommend that you use the supplied FM wire aerial only temporarily until you install an FM outdoor aerial. For the specific location of the FM ANTENNA terminal, see the illustration below.

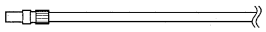


What will I need?

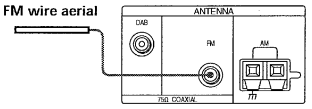
- FM wire aerial (supplied) (1)

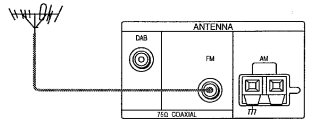


- FM outdoor aerial (not supplied) (1) and 75-ohm coaxial cable with IEC female type connector (not supplied) (1)



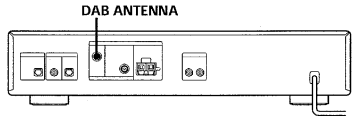
Connect the supplied FM wire aerial or an FM outdoor aerial (not supplied) to the FM terminal on the back of this unit.





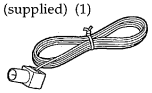
DAB aerial hookups

With an DAB outdoor aerial, you can obtain a higher DAB broadcast sound quality. We recommend that you use the supplied DAB wire aerial only temporarily until you install an DAB outdoor aerial. For the specific location of the DAB ANTENNA terminal, see the illustration below.

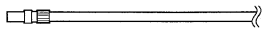


What will I need?

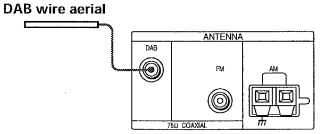
- DAB wire aerial (supplied) (1)



- DAB outdoor aerial (not supplied) (1) and 75-ohm coaxial cable with F male type connector (not supplied) (1)

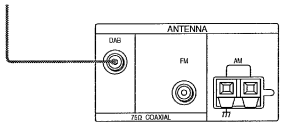


Connect the supplied DAB wire aerial or an DAB outdoor aerial (not supplied) to the DAB terminal on the back of this unit.



This section is extracted from instruction manual.

to DAB outdoor aerial

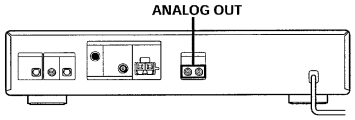


Connecting a ground wire

If you connect an outdoor aerial, be sure to connect a earth lead (not supplied) to the AM ANTENNA terminal with "⏚" indication (in addition to the AM loop aerial) for lightning protection.

Amplifier hookups

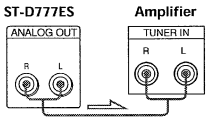
Connect the tuner to an amplifier. Be sure to turn off both components before connection. For the specific location of the terminals, see the illustration below.



What cables will I need?

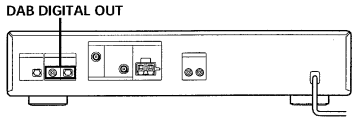
- Audio cord (supplied) (1)

Connect the white plugs to the white (L) jacks and the red plugs to the red (R) jacks. Insert the plugs completely into the jacks; incomplete connections may cause noise.



MD/DAT Hookups

This section describes how to connect the tuner to a DAT deck or MD recorder for digital-to-digital recording. With this connection, you can obtain the highest possible sound quality when recording DAB digital broadcasts, even if you use the analog outputs for listening purposes. For specific locations of the jacks, see the illustration below.

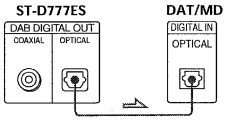


What cables will I need?

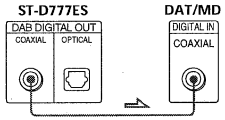
- Digital optical cable (not supplied) (1)

- Digital coaxial cable (not supplied) (1)

Digital Optical



Digital Coaxial

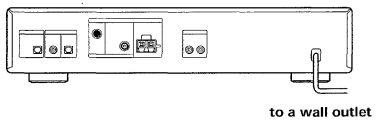


Notes

- When you use MD recorders which do not support to input the 48kHz digital audio signal, you cannot record the digital signals from the DIGITAL OUT jacks.
- The OPTICAL jack has retractable cover. Insert the plug into the jack.

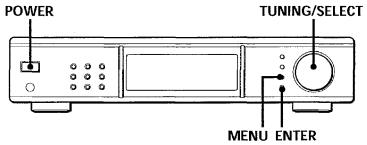
Mains lead hookup

Connect the mains lead to a wall outlet after completing all of the previous connections.



Selecting the German Display

You can select either an English or a German language display. The factory preset language is English. To change the display to German, follow the steps below.



1 Press POWER to turn on the tuner.

2 Press MENU.

3 Turn TUNING/SELECT so that "DISPLAY LANGUAGE to German" appears.

4 Press ENTER.
"Deutsch gewählt" appears in the display.

To return to the English display

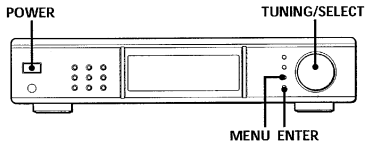
Select "AUSGABE SPRACHE English?" in step 3 above. Then press ENTER in step 4, "English Selected" appears in the display.

Storing DAB/FM Stations Automatically (Auto-betical Select)

With Auto-betical Select you can automatically store up to a combined total of 99 DAB and FM stations. At the same time, stations are stored in alphabetical order for each broadcast band without redundancy. Additionally, Auto-betical Select only stores the stations with the clearest signals. If you want to store DAB, FM or AM (MW and LW) stations one by one, see "Receiving Broadcasts" on page 10 and "Storing Stations Manually" on page 11.

Before you begin, make sure you have:

- connected DAB, FM and AM aerials to the tuner as indicated on pages 4 and 5.



1 Tune down the volume on the amplifier, then turn on the amplifier and select the TUNER mode.

2 Press POWER to turn on the tuner.

3 Press MENU.

4 Turn TUNING/SELECT so that "AUTO-BETICAL Audio Only" appears.

5 Press ENTER.
The tuner scans all the DAB and FM stations in the broadcast area.
While scanning, "Now AUTO-BETICAL" appears in the display.
For DAB and FM RDS stations, the tuner first checks for stations broadcasting the same programme, then stores only the one with the clearest signal. The selected DAB and FM RDS stations are sorted alphabetically by their Programme Service name, then assigned a number from 1 for each broadcast band. For more details on DAB and FM RDS, see page 10 (DAB) and 14 (FM RDS) .
Regular FM stations are also assigned preset numbers and stored after the FM RDS stations.
You can store up to a combined total of 99 stations in all broadcast band.
When scanning finishes, "AUTO-BETICAL End" flashes in the display.

To change the location of, or erase, a preset station
See "Organizing the Preset Stations" on page 13.

To store stations with data broadcasts
Select "AUTO-BETICAL: Audio & Data" in step 4 above. While receiving the data broadcast, the data is output only to the DAB RDI OUT connector.

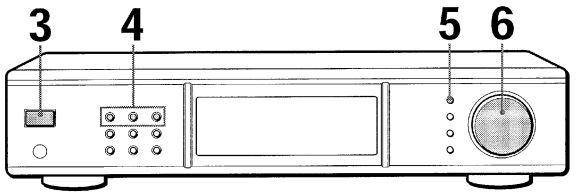
To confirm preset stations
1 Press DAB, FM or AM whichever you want to confirm.
2 Turn TUNING/SELECT.
You can receive the broadcasts of the preset station.

Notes

- DAB stations are sorted by ensemble frequency from low to high. In the ensemble, each service are arranged by programme service name alphabetically.
- If you move to another area, repeat this procedure to store stations in your new area.
- For details on tuning stored stations, see page 9.
- Each FM station is stored with the following setting:
  - ANTENNA ATTENUAT: OFF
  - IF BAND WIDTH: Wide
  - FM mode (Auto stereo/Monaural): Auto Stereo
  If you want to preset the diffrent setting for each FM station, change settings according to the procedures in "Tips for Better FM Reception" on page 18, then preset stations again.
- If you move the aerial after storing stations using Auto-betical Select, the stored settings may no longer be valid. If this happens, store the stations again.
- There is no sound when you receive DAB data broadcasts.

Receiving Preset Stations

This section shows you how to receive preset stations.



To tune in a non-preset station
See "Receiving Broadcasts" on page 9.

Listening a secondary component of the DAB programme
When "SC" appears in the display while listening a DAB programme, the secondary component is contained in the current service.
Press MONO/SC so that the desired secondary component is received. You can also use the remote for this operation.

Notes

- When you tune the DAB broadcast, do not tune up the volume on the amplifier too loud. Since the DAB broadcast has a wide dynamic range, a loud sound will affect your ears or cause the amplifier or speakers to be damaged.
- When you tune the DAB broadcast and change the station, it may take a few second.

When you directly specify a preset station numbered over 10
Press >10 first, then the corresponding number buttons.
To enter "0," use button 10/0.
Example: To tune the preset number 30
Press >10 first, then 3 and 10/0.

1 Make sure you've hooked up the tuner and preset stations. (See pages 4 - 6 for hookups and page 6 or 11 for presetting.)

2 Tune down the volume on the amplifier, then turn on the amplifier and select the TUNER mode.

3 Press POWER to turn on the tuner.

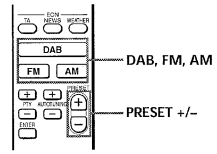
4 Press DAB, FM or AM for the desired type of broadcast.

5 Press TUNING MODE repeatedly so that "PRESET" appears in the display.

6 Turn TUNING/SELECT.
Each time you turn TUNING/SELECT, a preset station is received and the settings (preset number, frequency, and station name, etc.) appear in the display.

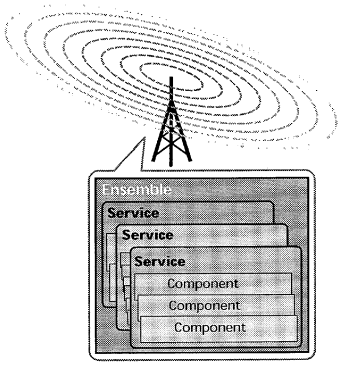
7 Adjust the volume of the amplifier.

To check the preset station by using the remote
Select the desired broadcast band by pressing the corresponding buttons on the remote, then specify the desired preset number using the number button on the remote.
You can also switch the next/previous preset number by pressing PRESET +/– instead of specifying the preset number directly.



Overview of DAB

DAB (Digital Audio Broadcasting) is a new multimedia broadcasting system that transmits audio programmes with a quality which is comparable from the current AM broadcasts to that of CDs.
Each DAB station multiplex radio programmes (**services**) into an **ensemble** which it then broadcasts. Each service contains one or more **components**. All services and components are identified by name, so you can access any of them without having to know their frequencies.
Furthermore, additional information (called programme associated data) can be broadcast along with the services in the form of text.



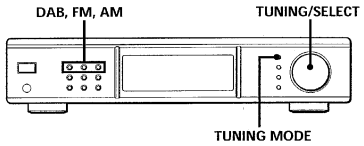
Notes

- The status of the DAB broadcast depends on your country or region. It may be not broadcasted or may be in the test phase.
- DAB programmes are broadcast in Band-III (174 to 240 MHz) and/or L-Band (1,452 to 1,491 MHz), with each band divided into channels (41 in Band-III and 23 in L-Band). These channels have its own channel label. For details of the channel label and its frequency, see the list in the page 20. One ensemble is broadcast per channel by each DAB station.

Receiving Broadcasts

Receiving broadcasts by scanning stations (Automatic Tuning)

With automatic tuning you can quickly tune in a station without having to know its frequency.



1 Press DAB, FM or AM for the desired type of broadcast.

2 Press TUNING MODE so that "AUTO" appears in the display.

3 Turn TUNING/SELECT slightly and release it when the frequency numbers start changing.
Turn the control to the right for a higher frequency; turn it to the left for a lower frequency.
When the tuner locates a station, it stops automatically. "TUNED" appears in the display.

4 Repeat step 3 until you tune in the appropriate station.
To store the station, operate steps 4 to 5 in the "Storing Stations Manually" on this page 11.

Note

When you tune the DAB broadcast and change the station, it may take a few second.

If you cannot tune in the station you want (Manual Tuning)

With manual tuning you can search through all stations broadcasting on each band, and tune in stations with extremely weak signals that you might not be able to receive with automatic tuning.

1 Press DAB, FM or AM for the desired type of broadcast.

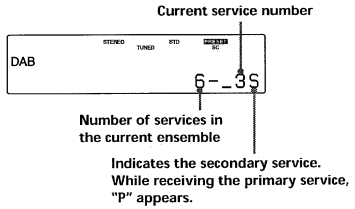
2 Press TUNING MODE so that neither "AUTO" nor "PRESET" appear in the display.

3 Turn TUNING/SELECT until you tune in the station you want.
Turn the control to the right for a higher frequency; turn it to the left for a lower frequency.

Listening to a secondary component of the DAB programme

When "SC" appears in the display while listening to a DAB programme, a secondary component is contained in the current service.
Press MONO/SC so that the desired secondary component is received.

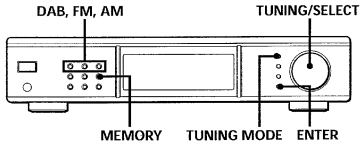
Display window while receiving the secondary component (automatic/manual tuning mode)


Current service number
DAB
6-3S
Number of services in the current ensemble
Indicates the secondary service. While receiving the primary service, "P" appears.

When you receive the secondary component in the preset tuning mode, the secondary service label appears in the display window.

Storing Stations Manually

This section shows you how to store up to 99 of your favorite DAB, FM or AM (MW and LW) stations manually onto preset numbers.
You can assign the preset number to the desired station from 1 for each broadcast band (DAB, FM and AM) up to a combined total of 99 stored stations.



1 Press DAB, FM or AM for the desired type of broadcast.

2 Press TUNING MODE repeatedly so that the tuner is set to automatic or manual tuning mode.

3 Turn TUNING/SELECT to tune in the station you want to store.

4 Press MEMORY.
"MEMORY" appears along with the lowest vacant number to indicate that the tuner is ready to store the station.

5 Press ENTER.
The tuner stores the station at the preset number.

6 Repeat steps 1 through 5 to store other stations.

If you want to preset the station to an already assigned number

Turn TUNING/SELECT so that the desired number appears after performing step 4 above. In this case, the previously preset station is replaced with the new one.

DAB and RDS Station names are stored automatically

When you preset a DAB or RDS station that is broadcasting station name information, the station name is automatically stored at the station preset.

If you want to label the stations

Follow the procedure described in "Naming the Preset Stations" on page 12.

When you tune in AM (MW and LW) stations

Adjust the direction of the AM loop aerial for optimum reception.

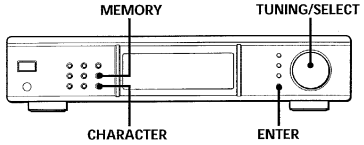
If the STEREO indicator remains off
Press MONO/SC when an FM stereo broadcast is received.

When you preset a FM station, ANTENNA ATTENUAT, IF BAND WIDTH and FM mode settings are stored simultaneously
If you want to store other settings, change settings according to the procedures in "Tips for Better FM Reception" on page 18 after performing step 3, then perform step 4.
When you want to change the settings for the preset station, tune the station and change the setting. Then, press MEMORY and ENTER.

Note
You cannot preset the secondary component (SC) of a DAB broadcast. Store the service which contains the desired component, then switch the component by pressing MONO/SC when you want to receive the component.

Naming the Preset Stations

You can assign a name of up to 16 characters long to each preset station except DAB and FM RDS stations. When the station is tuned in, the station name will appear.



1 Tune in the preset station you want to name.

2 Press CHARACTER.
The cursor flashes in the display.

3 Turn TUNING/SELECT to select a character.

4 When the character you want appears, press CHARACTER to move the cursor into position for the next character.

If you make a mistake
Press CHARACTER repeatedly until the character you want to change flashes (every time you press CHARACTER, the next character flashes). Then turn TUNING/SELECT to select a new character.

5 Repeat steps 2 and 3 until the station name you want appears in the display.

6 Press MEMORY.
"MEMORY" appears along with the preset number.

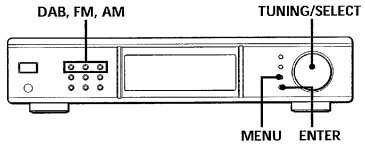
7 Press ENTER.
"PRESET Memory OK" appears.

When you name the station by Automatic tuning or Manual tuning
After the step 6 above, "MEMORY" appears along with the lowest vacant number to indicate that the tuner stores the station.

Note
- The display returns to normal display mode if you stop assigning names for more than 60 seconds. If this happens, start again from the beginning.
- If you name a station which has a preset name already, the previous preset name is deleted.
- "No Name" appears when you display a preset station without the preset name.
- You cannot use " " (blank space) only for the preset name.

Organizing the Preset Stations

This tuner makes it easy to arrange preset stations in the order you prefer. You can arrange all the preset stations automatically, according to alphabetical order, or you can use the Move and Erase functions to move and erase specific preset stations.



1 Press DAB, FM or AM for the desired type of broadcast.

2 Press MENU.

3 Turn TUNING/SELECT to select one of the following sorting methods:

Select	To
MOVE PRESET	change the location of a specific preset (see this page).
ERASE PRESET	erase a specific preset (see this page).
ALPHABETICAL PRESET SORT	sort all preset stations in alphabetical order in every broadcast band, according to their preset names. Stations without preset names are arranged by frequency, from low to high. DAB stations are arranged by ensemble frequency from low to high. In the ensemble, each service and component is arranged alphabetically, by preset name.

4 Press ENTER.
The tuner sorts the stations.

Moving a preset station

You can also move a specific preset station.

1 Follow steps 1 through 3 in "Organizing the Preset Stations" and select "MOVE PRESET" from the menu, then press ENTER.

2 Turn TUNING/SELECT so that the preset number you want to move appears in the display and press ENTER.

3 Turn TUNING/SELECT to select the new location for the preset number and press ENTER.
The preset station you selected is moved to the new location and the other preset stations shift backwards to make room for the new preset.

Example: If you move FM4 to FM 1.

Preset	FM1	FM2	FM3	FM4	FM5	FM6	FM7	FM8
Frequency	89.5	94.5	96.5	98.0	100.5	103.0	104.5	106.0

↓

Preset	FM1	FM2	FM3	FM4	FM5	FM6	FM7	FM8
Frequency	98.0	89.5	94.5	96.5	100.5	103.0	104.5	106.0

Erasing preset stations

You can erase preset stations one by one.

1 Follow steps 1 through 3 in "Organizing the Preset Stations" and select "ERASE PRESET" from the menu, then press ENTER.

2 Turn TUNING/SELECT so that the preset number you want to erase appears in the display and press ENTER.
The preset station you selected is erased from the preset memory and the other preset stations shift forward to fill in the blank space.

Example: If you erase FM1.

Preset	FM1	FM2	FM3	FM4	FM5	FM6	FM7	FM8
Frequency	89.5	94.5	96.5	98.0	100.5	103.0	104.5	106.0

↓

Preset	FM1	FM2	FM3	FM4	FM5	FM6	FM7	FM8
Frequency	94.5	96.5	98.0	100.5	103.0	104.5	106.0	

If you want to reset the preset stations to the factory preset setting
Turn off the tuner. Then, turn on the tuner again while holding down both ENTER and DAB.
All the settings of the tuner are reset to the factory preset setting.

Using the Radio Data System (FM RDS)

What you can do with RDS

The Radio Data System (RDS) is a broadcasting service that allows radio stations to send additional information along with the regular radio programme signal. This tuner offers you three convenient RDS features: Displaying the RDS information; Monitoring traffic, news, or weather information programmes; and Locating a station by programme type. RDS is available only on FM stations.*

Note

RDS may not work properly if the station you tuned to is not transmitting the RDS signal properly or if the signal strength is weak.

* Not all FM stations provide RDS service, nor do they provide the same types of services. If you are not familiar with the RDS system, check with your local radio stations for details on RDS services in your area.

Receiving RDS broadcasts

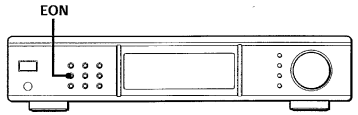
Simply select a station from the FM band.
When you tune in a station that provides RDS services, the RDS indicator and the station name appears in the display.

Notes

- If there is an emergency announcement by governmental authorities, "ALARM" flashes in the display.
- If a station is not providing a particular RDS service, "NO..." (such as "NO PTY") appears in the display.

Monitoring traffic, news, or weather information programmes (RDS EON/DAB Announcement)

Enhanced Other Networks (EON) and DAB announcement allows the tuner to automatically switch to a station broadcasting traffic, news, or weather information. After the programme ends, the tuner switches back to the station you were listening to. To use this function, be sure to store the stations beforehand.



1 Tune to a preset DAB or FM RDS station so that the RDS TP or EON indicators light in the display.

2 Press EON so that the programme you want to monitor appears in the display.
Each time you press EON, the display changes as follows:

TA → NEWS → WEATHER → TA & NEWS → TA & WEATHER → NEWS & WEATHER → TA & NEWS & WEATHER → Off

When the tuner automatically tunes in a traffic, news or weather information programme, the respective indicator flashes. If you do not want to listen to the entire programme, press EON to switch back to the original station.

To stop monitoring the programme

Press EON while the tuner is in the respective EON standby mode and the indicator goes off.

You can monitor traffic, news or weather information using the remote

Press TA (traffic), NEWS, WEATHER so that the corresponding indicator appears in the display.
To stop monitoring, press the button again.

Notes

- "Weak Signal" appears when the selected station has a weak signal. "Retune" appears when the tuner is trying to retune a station with a weak signal.
- Turn off the EON feature when you want to record a programme without interruptions, especially when you want to do timer recording.
- "No EON" appears in the display if you select an EON programme before tuning to an RDS station.

Locating a station by programme type (PTY)

When you receive preset DAB or FM RDS station, you can locate a station you want by selecting a programme type. The tuner tunes in the type of programmes currently being broadcast from the DAB or FM RDS stations stored in the tuner's preset memory.

1 Press DAB, FM or AM for the desired type of broadcast.

2 Press PTY.

3 Turn TUNING/SELECT to select the programme type you want. See the following table for the programme types you can select.

Programme type	What you hear
Alarm Test	Used only for dynamic switching
Alarm - Alarm!	Emergency broadcasts
Children's Progs	Programmes for the young
Country Music	Country music programmes
Cultures	Programmes about national or regional culture, such as language and social concerns
Current Affairs	Topical programmes that expand on current news
Documentary	Investigative features
Drama	Radio plays and serials
Easy Listening	Easy Listening (middle of the road music)
Education	Educational programmes, such as "how-to" and advice programmes
Finance	Stock market reports and trading, etc.
Folk Music	Folk music programmes
Information	Programmes offering information on a wide spectrum of subjects, including consumer affairs and medical advice
Jazz Music	Jazz programmes
Leisure & Hobby	Programmes on recreational activities such as gardening, fishing, cooking, etc.
Light Classics M	Classical music, such as instrumental, vocal, and choral works
National Music	Programmes featuring the popular music of the country or region
News	News programmes
None PTY	No programme type or undefined
Oldies Music	Programmes featuring oldies music
Other Music	Music that does not fit into any of the above categories, such as Rhythm & Blues and Reggae
Phone In	Programmes where members of the public express their views by phone or in a public forum
Pop Music	Popular music programmes
Religion	Programmes of religious content
Rock Music	Rock music programmes
Science	Programmes about the natural sciences and technology
Serious Classics	Performances of major orchestras, chamber music, opera, etc.
Social Affairs	Programmes about people and the things that affect them
Sport	Sports programmes

Programme type	What you hear
Traffic	Traffic announcements programmes
Travel & Touring	Programmes about travel. Not for announcements that are located by TP/TA
Varied Speech	Other types of programmes such as, celebrity interviews, panel games, and comedy
Weather & Metr	Weather information

4 Press ENTER.
The tuner starts searching the preset stations for the programme ("PTY Search" and the programme type are displayed).
When the tuner finds the programme you are looking for, it stops searching.

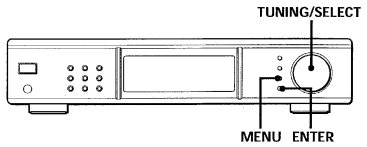
5 When you want to receive the same type of programme of other stations, repeat steps 2 to 4.

You can locate a station by programme type using the remote
Press PTY +/– to select the desired programme in step 2 above, then press ENTER.

Notes
- When you do not preset any DAB or FM station, you cannot use the PTY function.
- If you do not perform any operation for 20 seconds after performing step 3, the tuner returns to the status before you press PTY. To resume the operation, perform from step 2 again.

Using the Digital Filter

When receiving DAB programmes, you can use the digital filter to match your listening environment and the music source.



1 Press MENU.

2 Turn TUNING/SELECT so that "DIGITAL FILTER" appears.

3 Press ENTER.

4 Turn TUNING/SELECT to select the desired filter.
"*" indicates that the filter is currently selected.

5 Press ENTER.
The selected filter is set to on.

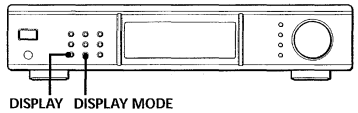
Characteristics of each digital filter

The contents and characteristics of the digital filters are as follows:
STD: Standard (Sharp roll-off): provides a wide frequency range and spatial feeling, as it holds the most information among the four filters.
Suitable for classical music.
Type1: CLEAR (slow roll-off): provides smooth and powerful sound with clear image position.
Suitable for jazz band performances and jazz vocals.
Type2: PLAIN (slow roll-off): provides fresh and energetic sound with rich vocal expression.
Suitable for vocal performances.
Type3: FINE (slow roll-off): provides well-balanced natural sound, with a large scale feel and rich reverberation.
Suitable for listening to any kind of music when you are relaxed.

You can also use the digital filter using the remote
Press DIGITAL FILTER on the remote.
Each time you press DIGITAL FILTER, the digital filter changes in the order as follows:

STD → Type1 → Type2 → Type3

Using the Display



Display Information

You can check the status of this tuner and the information about the programme using the display.

When you tune in the DAB station
Each time you press DISPLAY, the display changes as follows:

Preset number/Channel label (Normal display)
↓
Ensemble label
↓
PTY
↓
Dynamic label (Radio Text)
↓
Clock time
↓
Frequency
↓
Component label 1)

1) Only when you tune in the secondary component. In this case, the normal display is set to component label.

When "SC" appears in the display
You can tune in the secondary component. For details, see page 11.

When "STEREO" appears in the display
The current programme is broadcasted in the stereo/joint (intensity) stereo mode.

When you tune in the FM or AM station
Each time you press DISPLAY, the display changes as follows:

Frequency (Normal display)
↓
PTY 2)
↓
Radio Text 2)
↓
Clock time 2)
↓
Signal Level

2) Only when you tune in a FM RDS station

Customizing the display

You can select the appearance of the display from one of the following four display modes.

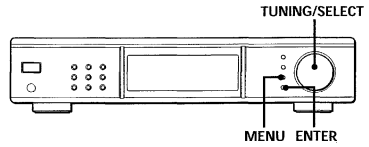
Press DISPLAY MODE.
Each time you press DISPLAY MODE, the display changes as follows:

Full Display/Full Brightness → Full Display/Dimmed → Minimal Display/Full Brightness → Minimal Display/Dimmed

The setting remains in effect until you change it again. If you press one of the buttons on this unit, the minimal display changes to the full display with the selected brightness. After about 4 seconds, the display returns to the display mode you selected.

About the Menu Entry System

This tuner uses a menu entry system which allows you to operate various functions by following messages on the display. Use the following controls for menu operation.



Use the	To
MENU button	enter the menu mode.
TUNING/SELECT control	display different items or settings.
ENTER button	select the currently displayed item or setting.

Switching the remote mode of this tuner

By switching the remote mode of this tuner, you can control some functions of this tuner from the remote for other equipment such as Sony tuner or amplifier.

1 Press MENU.

2 Turn TUNING/SELECT to display "COMMAND MODE to Expand".

3 Press ENTER.

To return the remote mode for the supplied remote only

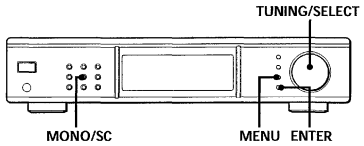
Choose "COMMAND MODE to Exclusive" in step 2 above.

Notes

- Regardless of the remote mode, you can control all functions of this tuner using the supplied remote.
- Though you switch the remote mode to "EXPAND", you cannot control some functions of this tuner without the supplied remote.

Tips for Better FM Reception

This tuner has various functions designed for better FM reception. First, try to receive stations with the standard settings. If the reception is not good, try altering the reception quality to obtain a clear signal. The tuner stores the following adjustments, together with the frequency when you make a station preset.



Finding the best aerial attenuator

You can lowers the level of the input signal to receive broadcasts with extremely high signal levels.

1 Press MENU.

2 Turn TUNING/SELECT to display "ANTENNA ATTENUAT to ON".

3 Press ENTER.

When you turn off the antenna attenuator

Choose "ANTENNA ATTENUAT to OFF" in step 2 above.

Finding a best intermediate frequency band width

You can improve the selectivity and reduce interference to make broadcasts with weak signals easier to listen to.

1 Press MENU.

2 Turn TUNING/SELECT to display "IF BAND WIDTH to NARROW".

3 Press ENTER.

To tune in only the stations with high sound quality and low distortion

Choose "IF BAND WIDTH to WIDE" in step 2 above.

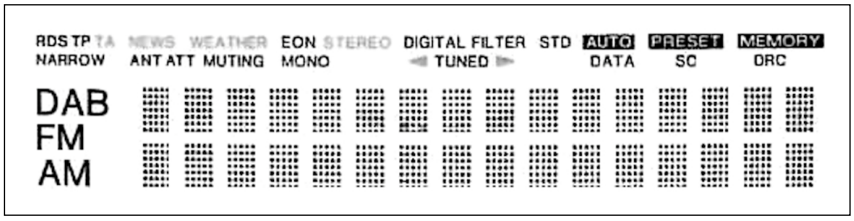
If an FM stereo programme is distorted

Press MONO/SC to change to monaural (MONO). You will not have the stereo effect but the distortion will be reduced. To return to stereo mode, press this button again.

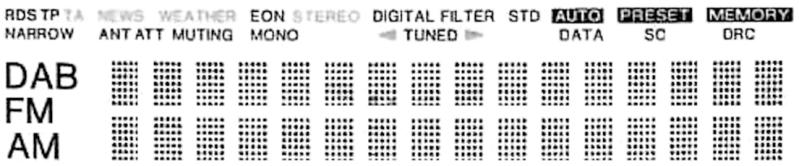
SECTION 2
TEST MODE

1. Display Tube Check and KEY Check mode

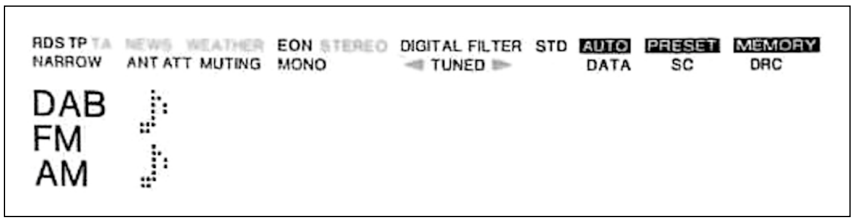
1. Turn OFF the power.
2. While pressing [DISPLAY] and [MENU] together, turn ON [POWER] .
3. Display tube all lit.



4. Each time the button is pressed, the key number is counted down. After all the 14 buttons are pressed, “OK” appears.
When the [DAB], [FM] or [AM] button is pressed only, the following display appears.

DAB	
FM	
AM	

5. The two eighth notes are moved from the left to the right by turning the [TUNING/SELECT] dial clockwise. The notes are moved from the right to the left by turning the dial counterclockwise.



2. Entering the Factory Preset (In case perform just to write memory of the Factory Preset.)

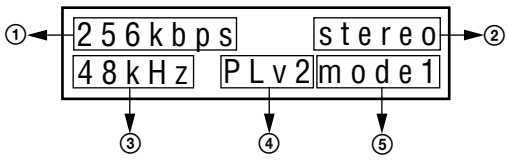
1. Turn OFF the power.
2. While pressing [ENTER] and [DAB] together, turn ON [POWER] .

3. Microprocessor Version Display Mode

1. Turn off the power.
2. While pressing [MENU] and [AM] together, turn ON [POWER] .
3. The version and the date of the microprocessor are displayed.
4. Press the [ENTER] button to end this mode.

• Audio information display (DAB only)

Press [DISPLAY] and [ENTER] at the same time under the DAB tuned condition.
Audio information for service that is selected at present is displayed.

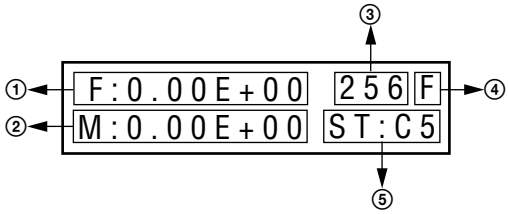


①: Bit rate
②: Audio contents
- stereo = stereo broadcast
- joint = joint stereo broadcast
- dual = dual channel broadcast
- single = single channel broadcast
- stream = stream data broadcast
- FIDC = FIDC data broadcast
- Packet = packet data broadcast

③: Sampling frequency
④: Protection level
⑤: Transmission mode

• DAB error rate display

Press [DAB] and [CHARACTER] at the same time under the DAB tuned condition. (When the software version is 1.04, press [DAB] ten times while [CHARACTER] is kept pressed.)
The bit error rate is displayed.



①: PIC error rate
②: MSC error rate
③: Bit rate
④: In case of audio service
- F : 48 kHz sampling
- H : 24 kHz sampling

In case of data service
- S : stream data
- F : FIDC
- P : pocket data

⑤: DAB decoder status information
Check the contents in binary notation.
- Bit 7 : not used
- Bit 6 : 1 when AFC is converged.
- Bits 5 to 3 : The number of CRC errors during MPEG decode
- Bit 2 : 1 when initial pulling-in is complete.
- Bits 1, 0 : Contents of DAB frame length judgment

Bit 1	Bit 0	Frame length
0	1	96 ms
0	0	48 ms
1	0	24 ms
1	1	Judgment impossible

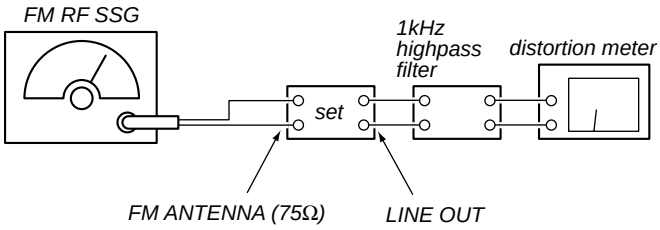
SECTION 3
ELECTRICAL ADJUSTMENTS

All the settings are performed in the Factory Preset state. (Refer to page 13.)

Precautions in Repairing

If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

FM SECTION **0dB = 1µV**

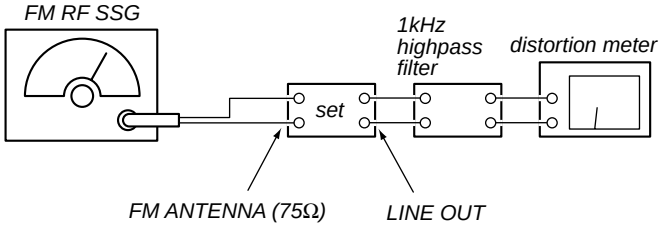


- Standard Setting of FM Stereo RF Signal Generator.

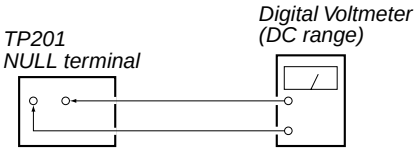
STEREO STANDARD SIGNAL	MONAURAL STANDARD SIGNAL
Carrier frequency : 98MHz Modulation : Audio 1kHz Main channel (L+R) : 33.75kHz deviation Sub channel (L–R) : 33.75kHz deviation Pilot : 7.5kHz Deviation	Carrier frequency : 98MHz Modulation : Audio 1kHz 75kHz deviation

FM Discriminator ADJUSTMENT (NULL and MONO Distortion Adjustment)

Setting:



Modulation : Monaural Standard signal
Output level : 6mV (76dB) (at 75 Ω open)



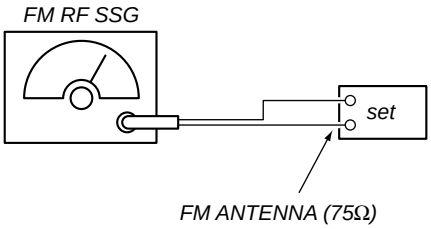
Procedure:

1. Tune the set to 98 MHz.
2. Adjust IFT202 for 0V reading on the digital voltmeter.
   ..... NULL
3. Adjust IFT203 for a minimum reading on the distortion meter.
   ..... MONO Distortion (THD)
4. Repeat the adjustments of 2 and 3 several times.

Note : When replacing the ceramic filter, perform this alignment.

Stereo and Tuned Level Adjustment

Setting:



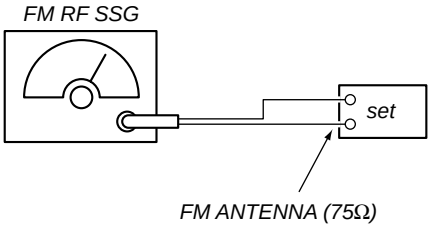
Modulation : Stereo Standard signal
Output level : 18μV (25dB) (at 75 Ω open)

Procedure:

1. Tune the set to 98 MHz.
2. Adjust RV203 to the point (moment) when the “STEREO” and “TUNED” indicators will change from going off to going on.

FM Signal Level Adjustment

Setting:



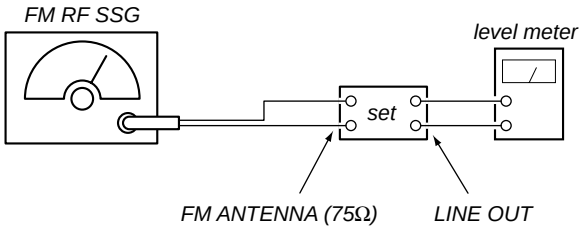
Modulation : Stereo Standard signal
Output level : 3mV (76dB) (at 75 Ω open)

Procedure:

1. Tune the set to 98 MHz.
2. Press DISPLAY button to display the digital signal, then adjust RV202 to be display as “Signal 70dB”.

Stereo Separation Adjustment

Setting:



Modulation : Stereo Standard signal
Output level : 6mV (76dB) (at 75 Ω open)

Procedure:

FM stereo Signal generator Output channel L-CH	Level meter connection L-CH	Level meter reading (dB) Ⓐ
R-CH	L-CH	Ⓑ Adjust RV301 for minimum reading on Level meter
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV301 for minimum reading on Level meter

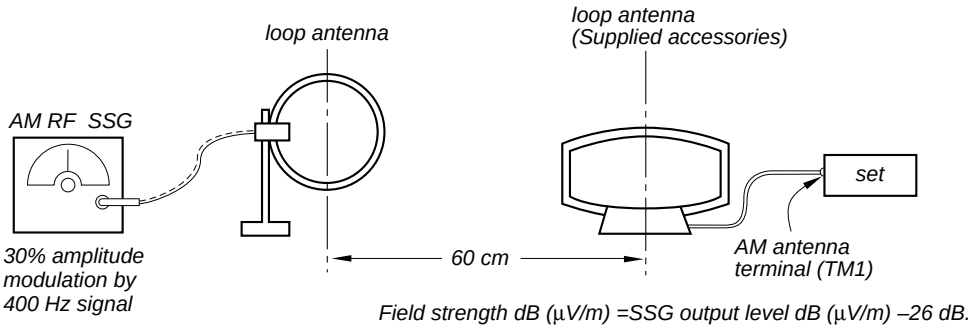
L-CH Stereo separation : Ⓐ – Ⓑ
R-CH Stereo separation : Ⓒ – Ⓓ

The separations of both channels should be equal.

AM SECTION

AM Tuned Level Adjustment

Setting:



Field strength dB (µV/m) =SSG output level dB (µV/m) –26 dB.

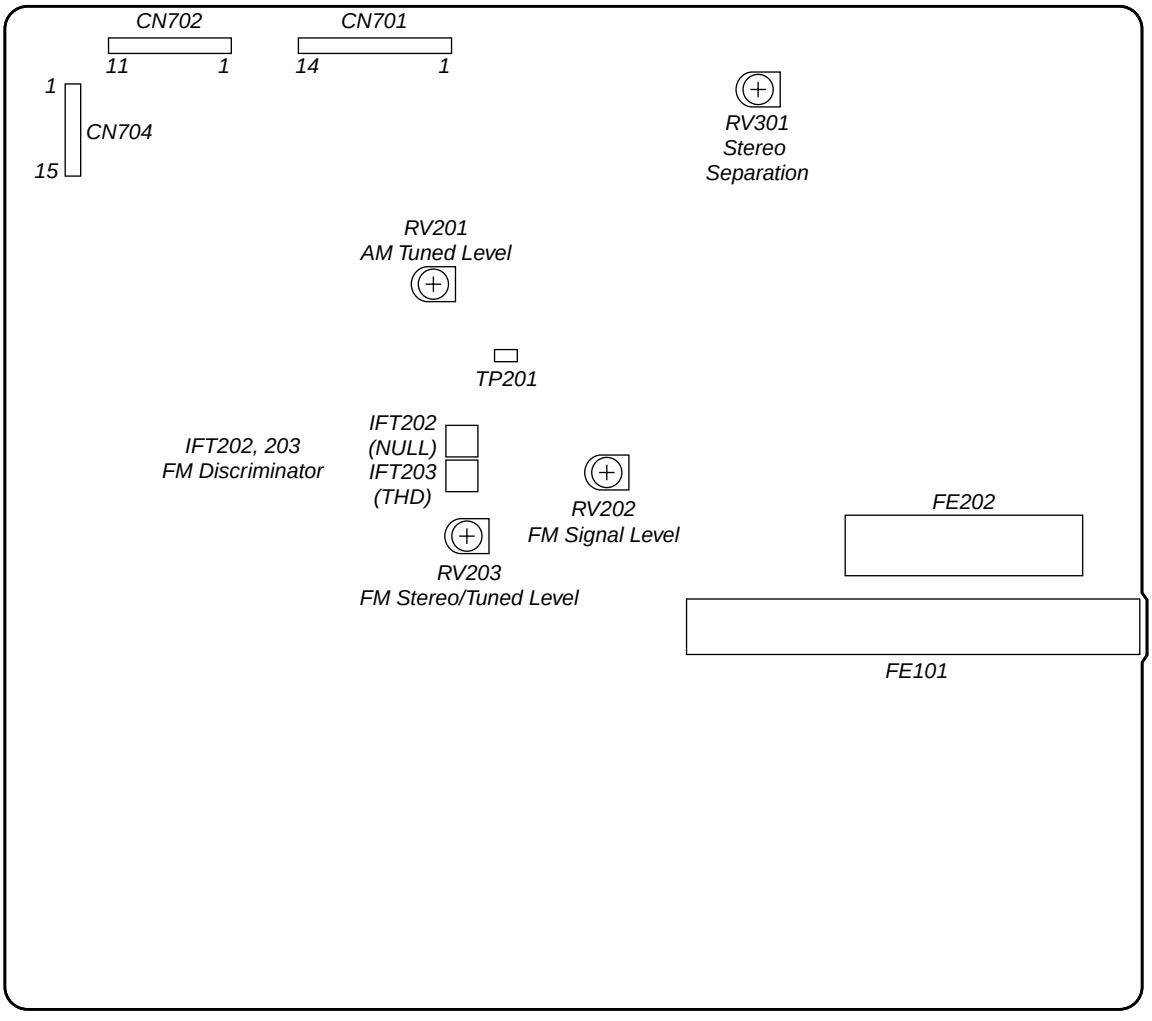
Carrier frequency : 216kHz
Modulation : AUDIO 400Hz, 30% modulation

Procedure:

1. Set AM RF signal generator so that the AM antenna input level becomes 74dBµ/m.
2. Adjust the position of RV201 so that " TUNED" lights.

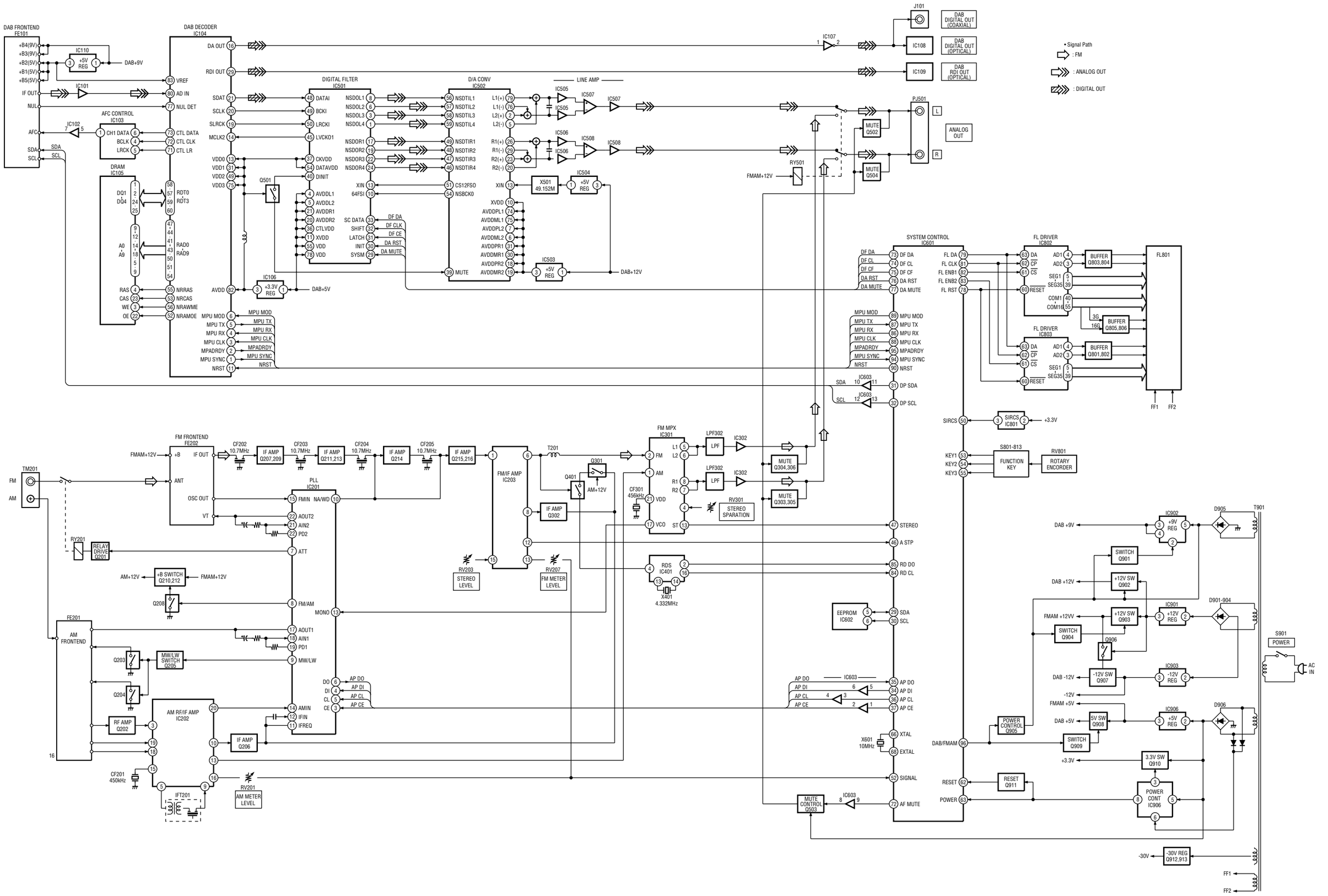
Adjustment Location

[MAIN BOARD] — Component Side —

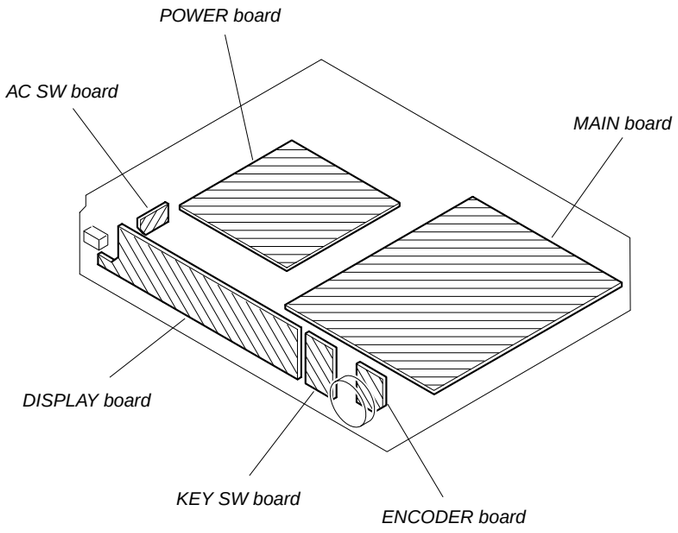


SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM



4-2. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

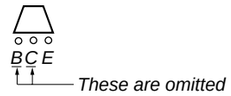
- B+ : B+ Line.
- B− : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  < > : LW
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM

For printed wiring boards.

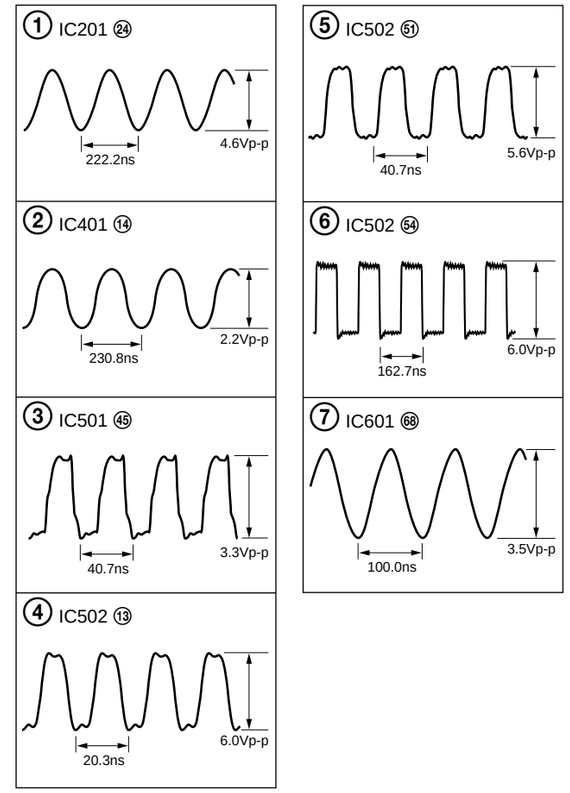
Note:

- ○——— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

- **Indication of transistor**

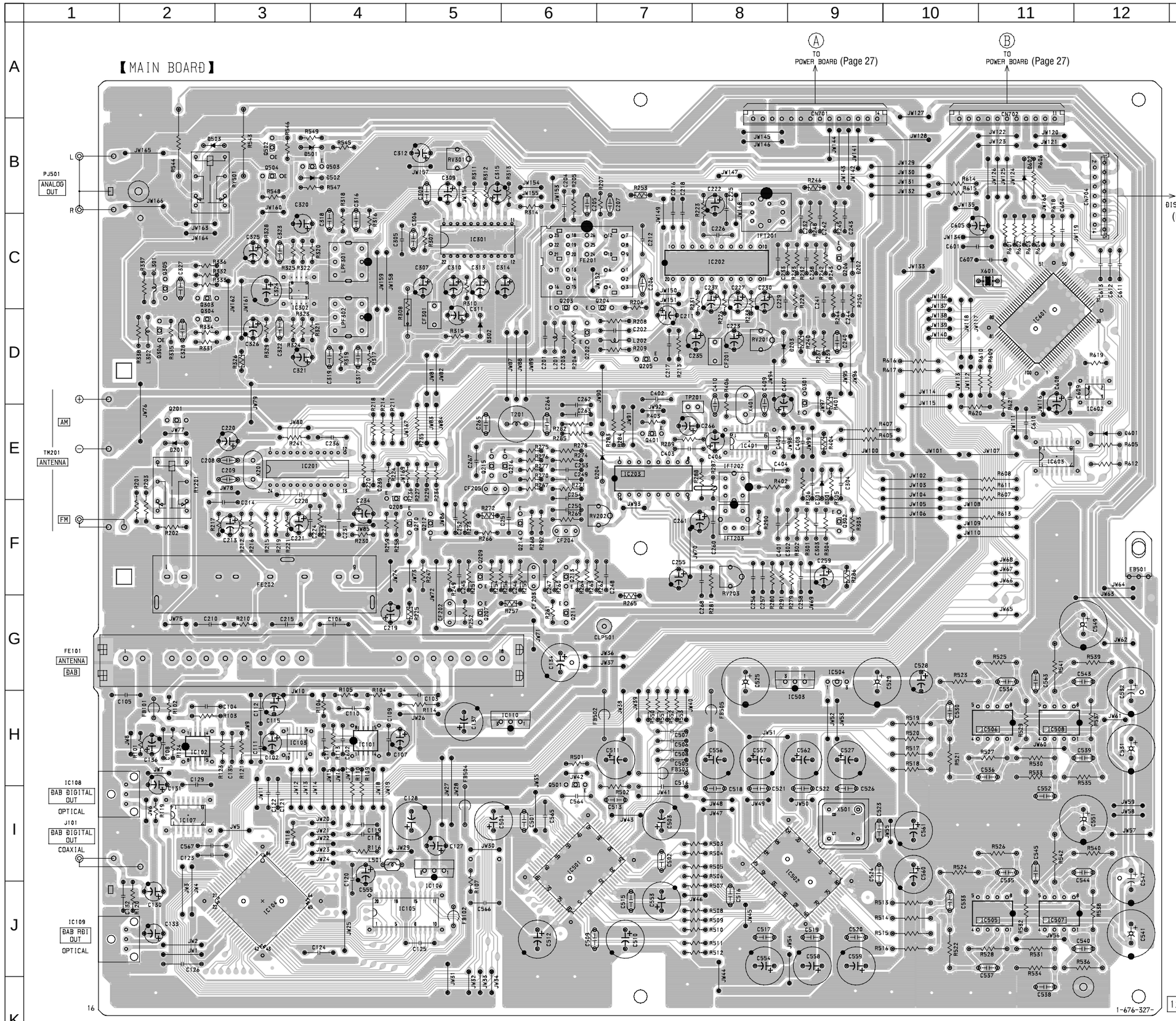


- **Waveforms**
  MAIN board



4-3. PRINTED WIRING BOARD MAIN SECTION

• Refer to page 18 for Circuit Boards Location.

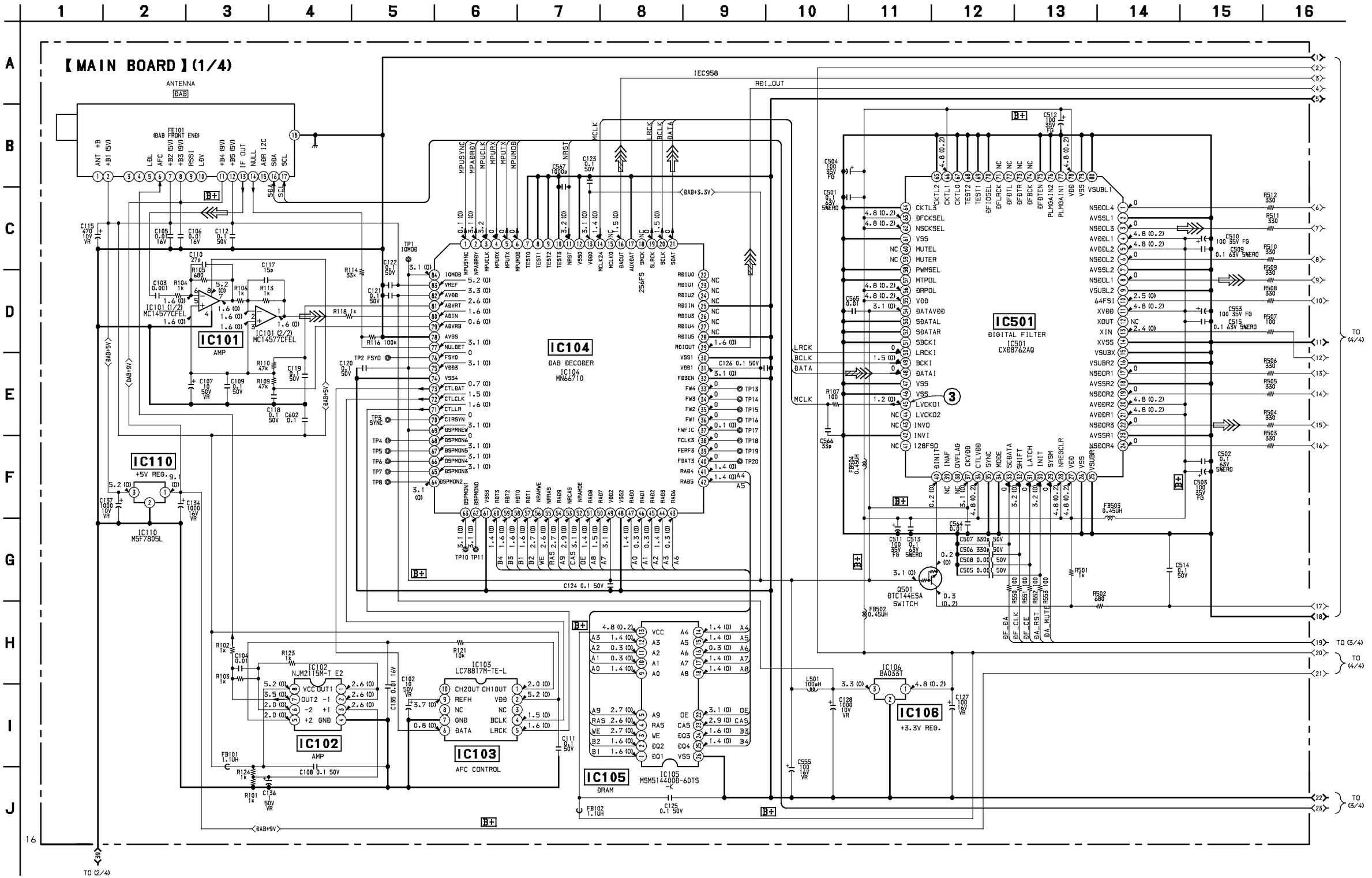


• **Semiconductor Location**

Ref. No.	Location
D201	E-2
D202	C-9
D203	D-9
D204	E-7
D301	E-9
D302	C-5
D501	B-4
D502	B-4
D503	B-3
D601	D-12
D602	B-11
IC101	H-4
IC102	H-2
IC103	H-3
IC104	I-3
IC105	J-5
IC106	I-5
IC107	I-2
IC108	I-2
IC109	J-2
IC110	H-6
IC201	E-3
IC202	C-8
IC203	E-7
IC301	C-5
IC302	C-3
IC401	E-8
IC501	I-6
IC502	I-9
IC503	G-9
IC504	G-9
IC505	J-11
IC506	H-11
IC507	J-12
IC508	H-12
IC601	C-12
IC602	D-12
IC603	E-11
Q201	E-2
Q202	D-6
Q203	C-6
Q204	C-7
Q205	D-7
Q206	C-9
Q207	G-5
Q208	E-4
Q209	F-5
Q210	F-5
Q211	G-6
Q212	F-5
Q213	F-6
Q214	F-6
Q215	E-5
Q216	E-6
Q301	D-9
Q302	F-9
Q303	C-2
Q304	D-2
Q305	C-2
Q306	D-2
Q401	E-7
Q501	I-7
Q502	B-3
Q503	B-4
Q504	B-3

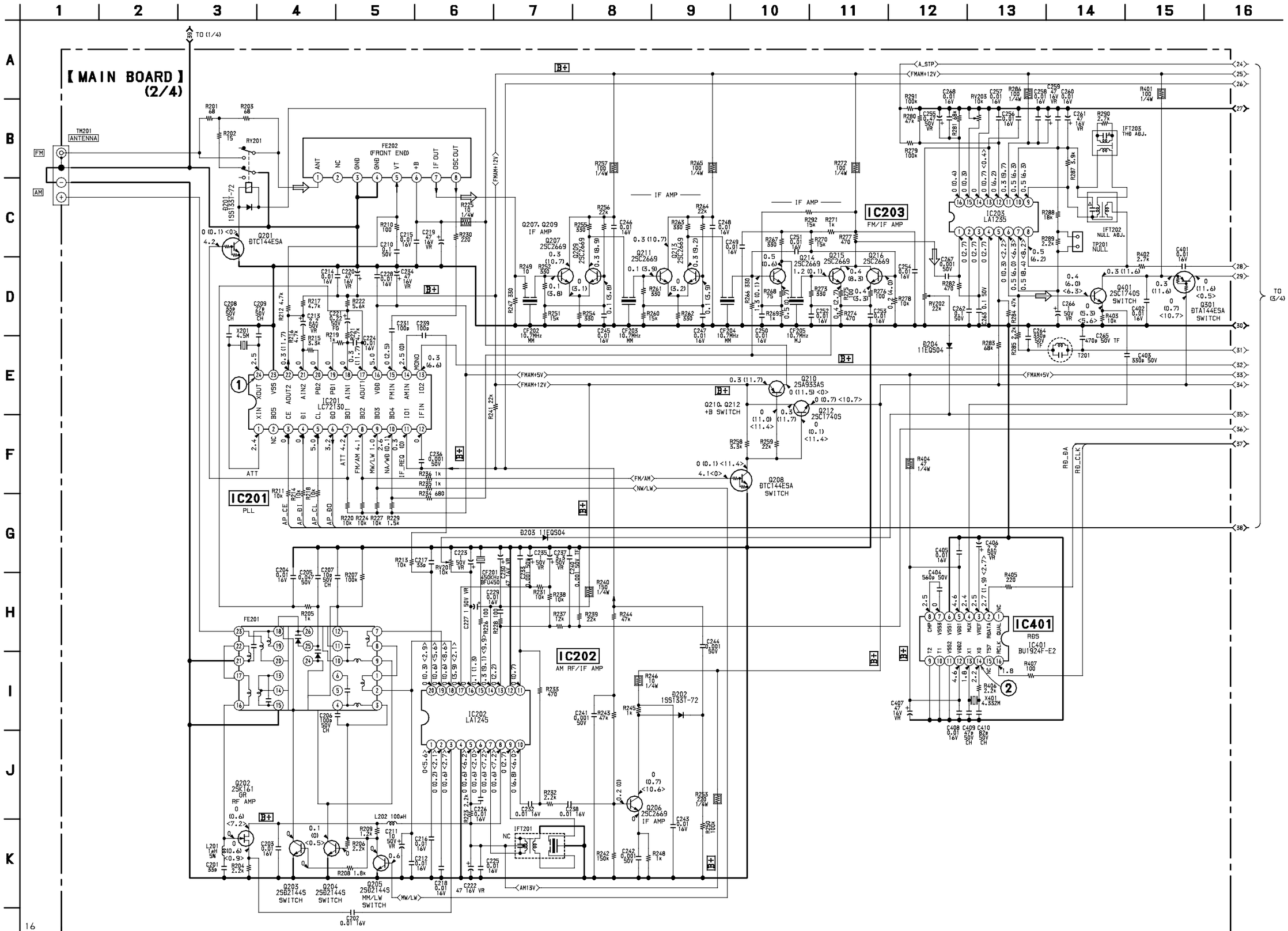
4-4. SCHEMATIC DIAGRAM MAIN SECTION (1/4)

• Refer to page 19 for Printed Wiring Board.
• Refer to page 18 for Waveform.
• Refer to page 28 for IC Pin Function Description.
• Refer to page 31 for IC Block Diagrams.



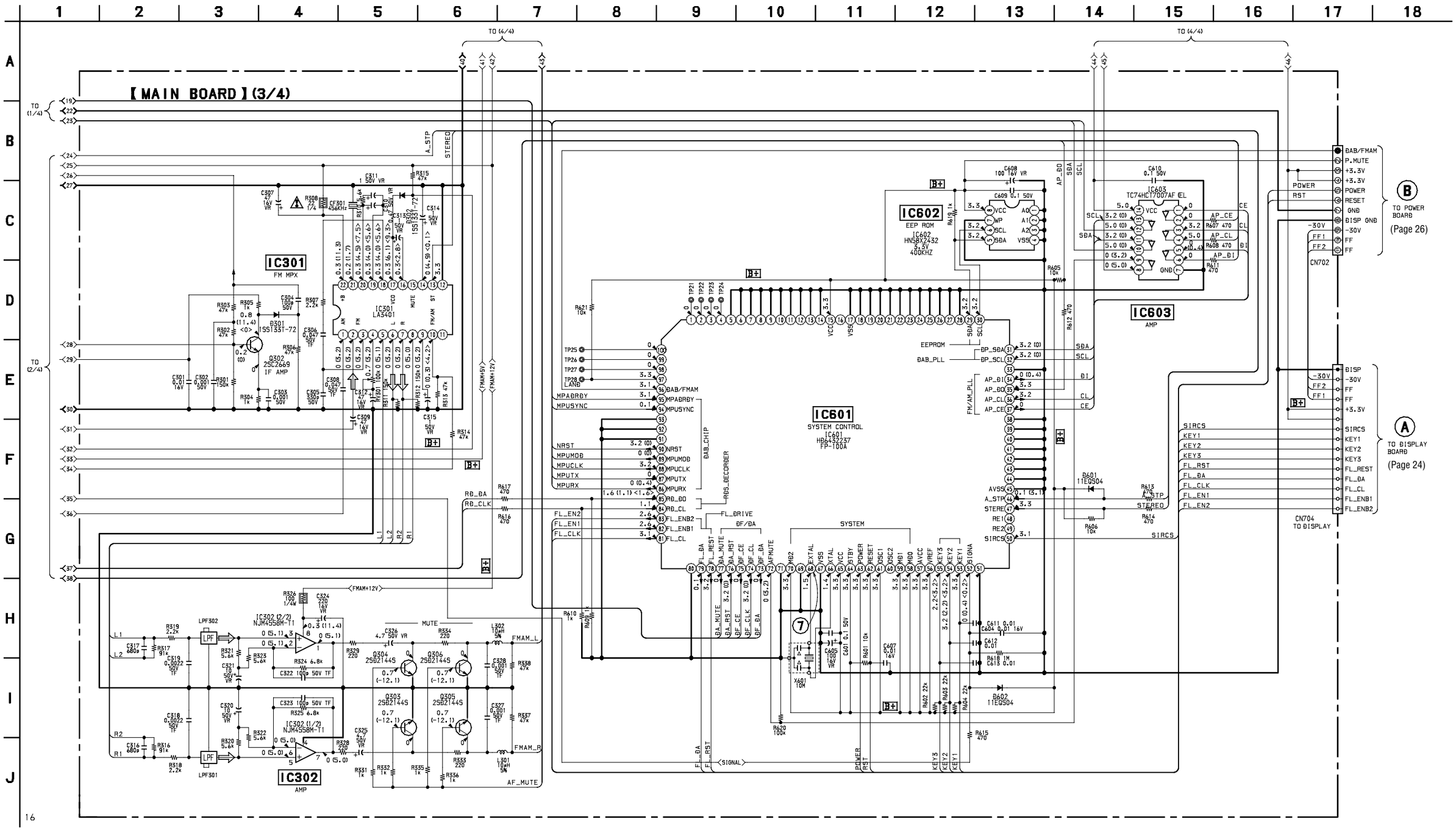
4-5. SCHEMATIC DIAGRAM MAIN SECTION (2/4)

• Refer to page 19 for Printed Wiring Board. • Refer to page 32, 33 for IC Block Diagrams.
• Refer to page 18 for Waveform.



4-6. SCHEMATIC DIAGRAM MAIN SECTION (3/4)

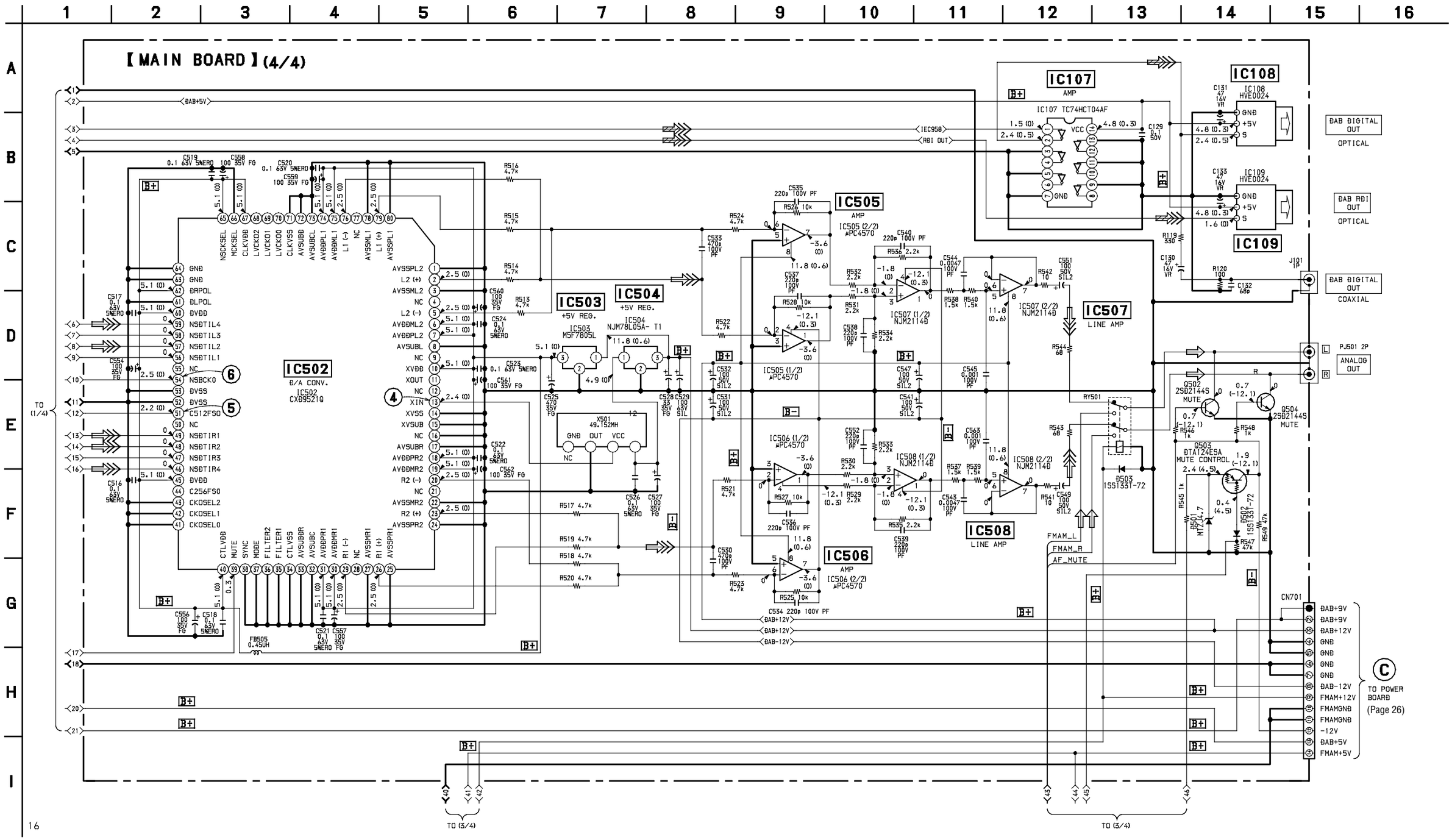
• Refer to page 19 for Printed Wiring Board.
• Refer to page 18 for Waveform.
• Refer to page 33 for IC Block Diagrams.
• Refer to page 29 for IC Pin Function Description.



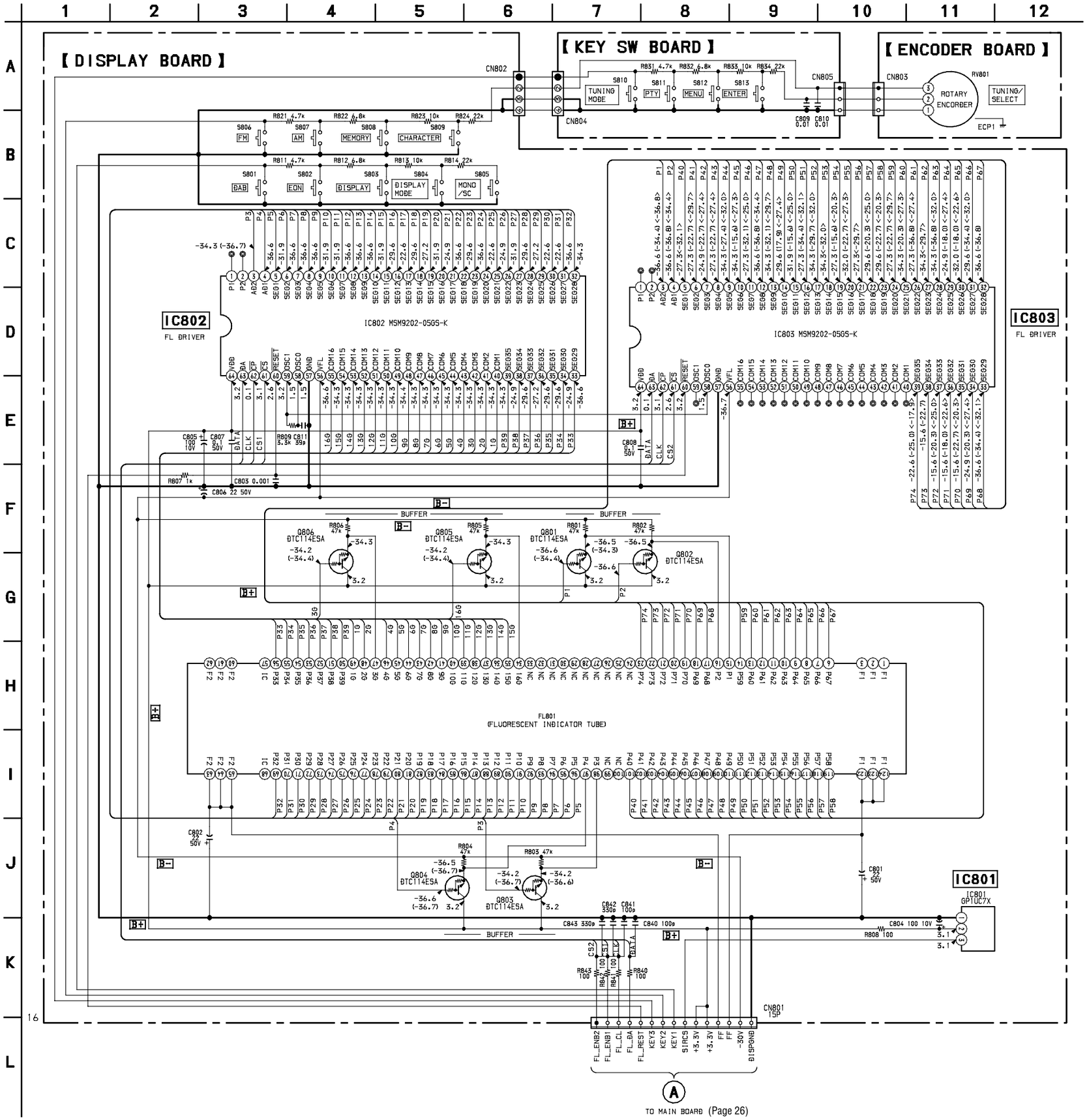
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

4-7. SCHEMATIC DIAGRAM MAIN SECTION (4/4)

• Refer to page 19 for Printed Wiring Board. • Refer to page 31 for IC Block Diagrams.
• Refer to page 18 for Waveforms.

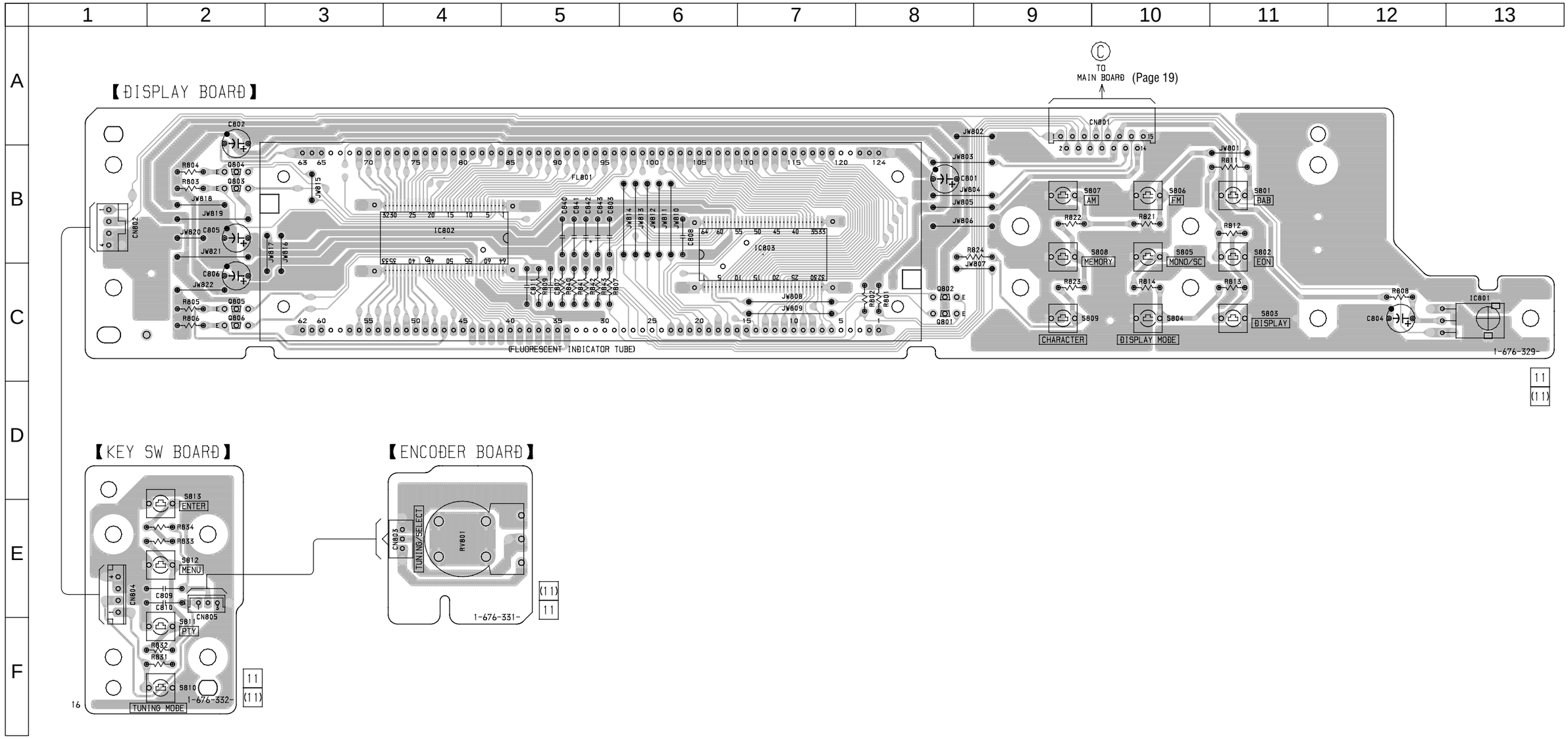


4-8. SCHEMATIC DIAGRAM DISPLAY SECTION



4-9. PRINTED WIRING BOARD DISPLAY SECTION

• Refer to page 18 for Circuit Boards Location.

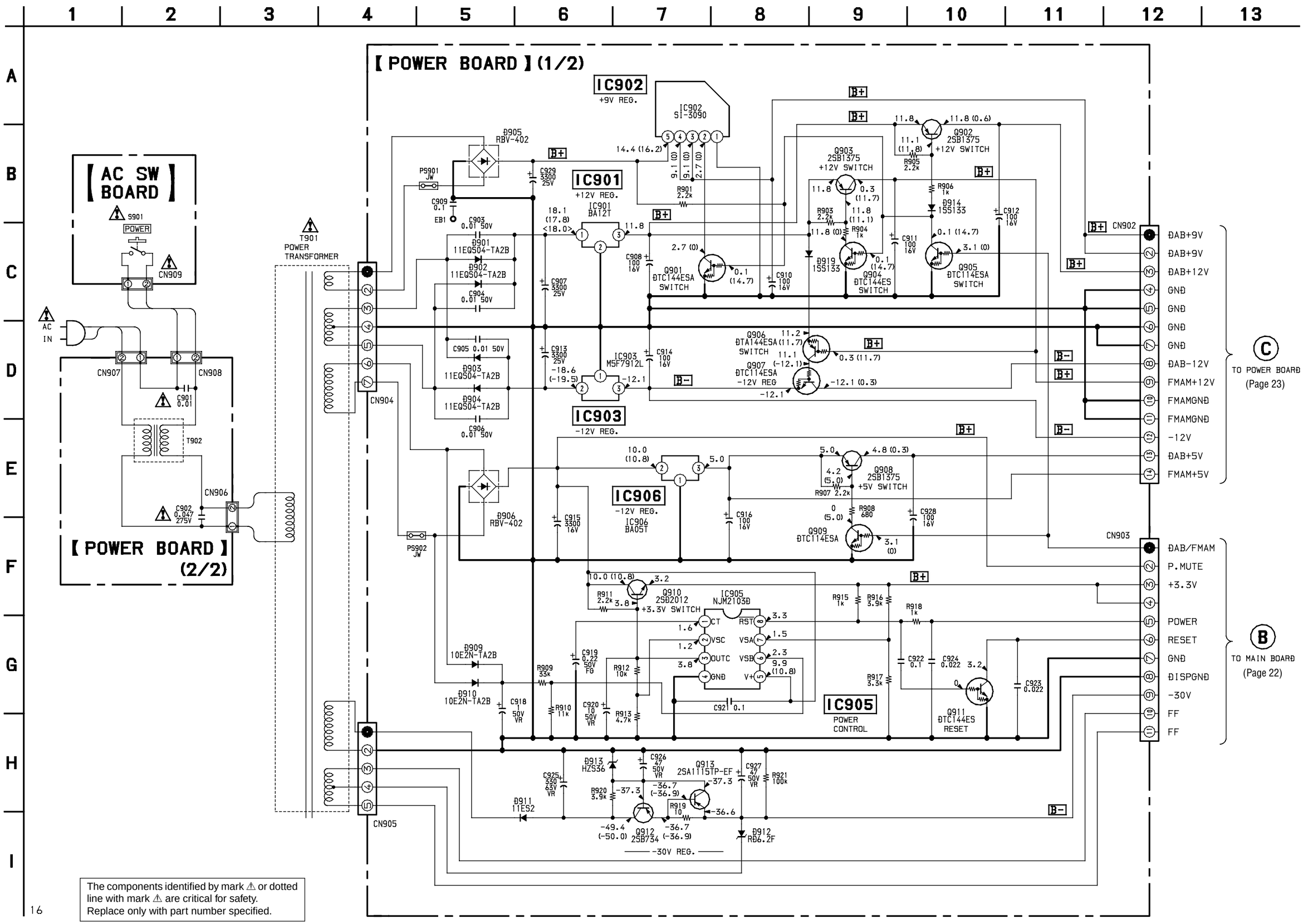


• **Semiconductor Location**

Ref. No.	Location
IC801	C-13
IC802	B-4
IC803	B-7
Q801	C-8
Q802	C-8
Q803	B-2
Q804	B-2
Q805	C-2
Q806	C-2

4-10. SCHEMATIC DIAGRAM POWER SECTION

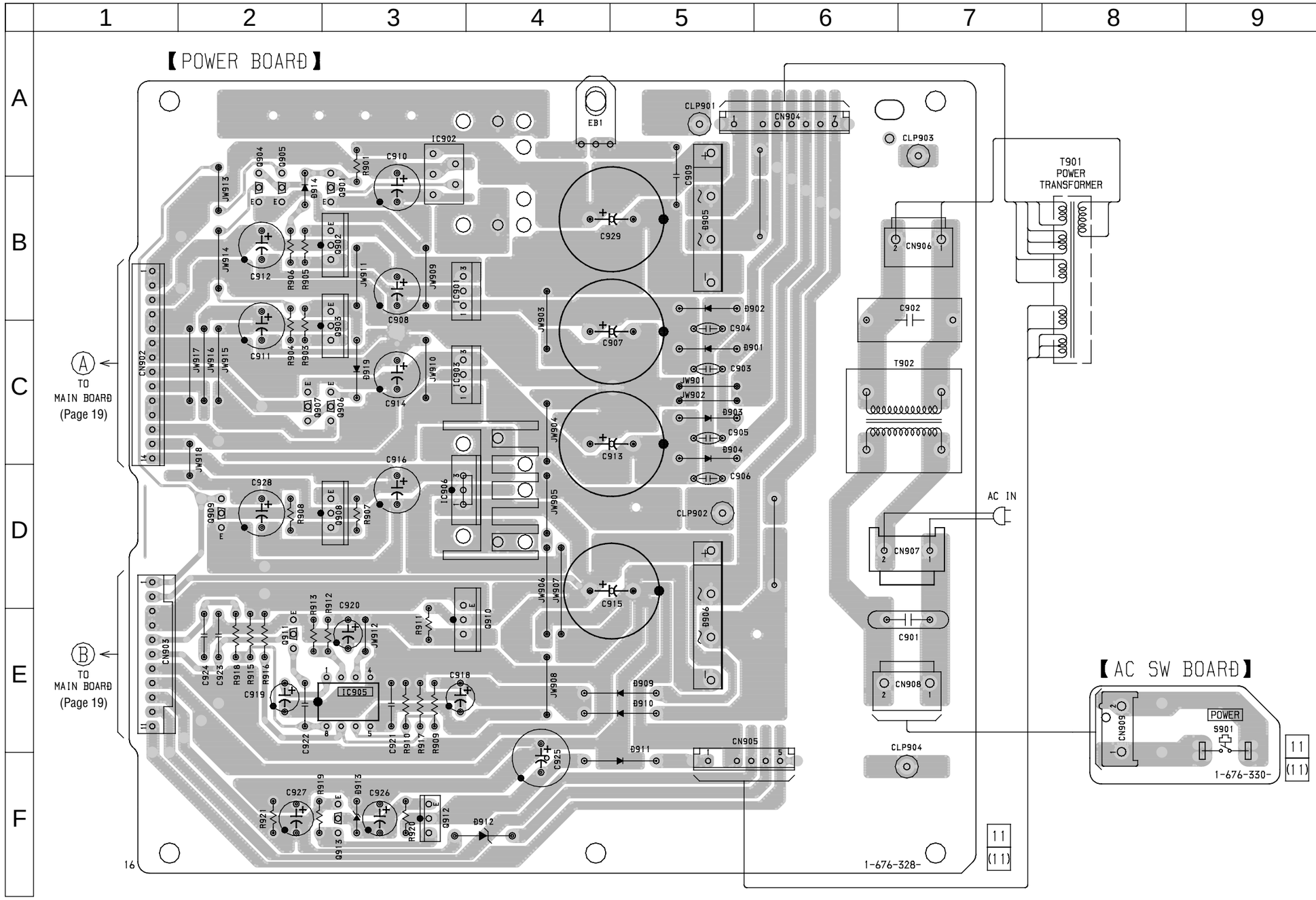
• Refer to page 33 for IC Block Diagram.



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

4-11. PRINTED WIRING BOARD POWER SECTION

• Refer to page 18 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location
D901	C-5
D902	B-5
D903	C-5
D904	C-5
D905	B-5
D906	D-5
D909	E-5
D910	E-5
D911	F-5
D912	F-4
D913	F-3
D914	B-2
D919	C-3
IC901	B-4
IC902	B-3
IC903	C-7
IC905	E-3
IC906	D-4
Q901	B-3
Q902	B-3
Q903	C-3
Q904	B-2
Q905	B-2
Q906	C-3
Q907	C-2
Q908	D-3
Q909	D-9
Q910	E-4
Q911	E-2
Q912	F-3
Q913	F-3

4-12. IC PIN FUNCTION DESCRIPTION

IC104 MN66710 DAB DECODER (MAIN BOARD)

Pin No.	Pin Name	I/O	Description
1	MPUSYNC	O	Microprocessor operation reference signal
2	NPADRDY	O	PAD data ready signal
3	MPUCLK	I	Microprocessor I/F data clock input
4	MPURX	I	Microprocessor I/F received data input
5	MPUTX	O	Microprocessor I/F send data output
6	MPUMOD	I	Microprocessor I/F mode
7	TEST0	I	Test mode setting
8	TEST1	I	Test mode setting
9	TEST2	I	Test mode setting
10	TEST3	I	Test mode setting
11	NRST	I	Master reset input
12	Vss0	—	Digital Vss
13	VDD0	—	Digital VDD
14	MCLK24	I	Master clock (23.576 MHz) input
15	MCLK0	O	Output of master clock oscillator circuit
16	DAOUT	O	SPDIF digital audio I/F output
17	AUXDAT	I	Audio ADC serial data input
18	SMCK	O	Audio AD/DA master clock
19	SLRCK	O	Audio AD/DA LR clock
20	SCLK	O	Audio AD/DA serial clock output
21	SDAT	O	Audio DAC serial data output
22	RDIU0	O	Auxiliary output for RD expansion
23	RDIU1	O	Auxiliary output for RD expansion
24	RDIU2	O	Auxiliary output for RD expansion
25	RDIIN	I	RD1 input
26	RDIU3	O	Auxiliary output for RD expansion
27	RDIU4	O	Auxiliary output for RD expansion
28	RDIU5	I	Auxiliary input for RD expansion
29	RDIOUT	O	RD1 output
30	Vss1	—	Digital Vss
31	VDD1	—	Digital VDD
32	FD3EN	I	General purpose data output enable
33	FW4	O	General purpose data output window 4
34	FW3	O	General purpose data output window 3
35	FW2	O	General purpose data output window 2
36	FW1	O	General purpose data output window 1
37	FWFIC	O	General purpose data output window 0
38	FCLK3	O	General purpose data output clock
39	FERF3	O	General purpose data output error flag
40	FDAT3	O	General purpose data output data
41	RAD4	O	External DRAM address bit 4
42	RAD5	O	External DRAM address bit 5
43	RAD6	O	External DRAM address bit 6
44	RAD3	O	External DRAM address bit 3
45	RAD2	O	External DRAM address bit 2
46	RAD1	O	External DRAM address bit 1
47	RAD0	O	External DRAM address bit 0
48	Vss2	—	Digital Vss
49	VDD2	—	Digital VDD
50	RAD7	O	External DRAM address bit 7
51	RAD8	O	External DRAM address bit 8
52	NRAMOE	O	External DRAM output enable
53	NRCAS	O	External DRAM column address strobe
54	RAD9	O	External DRAM address bit 9
55	NRRAS	O	External DRAM row address strobe
56	NRAMWE	O	External DRAM write enable
57	RDT1	I/O	External DRAM data bit 1
58	RDT0	I/O	External DRAM data bit 0
59	RDT2	I/O	External DRAM data bit 2
60	RDT3	I/O	External DRAM data bit 3
61	Vss3	—	Digital Vss
62	DSPMON0	O	DSP monitor output bit 0
63	DSPMON1	O	DSP monitor output bit 1
64	DSPMON2	O	DSP monitor output bit 2
65	DSPMON3	O	DSP monitor output bit 3
66	DSPMON4	O	DSP monitor output bit 4
67	DSPMON5	O	DSP monitor output bit 5
68	DSPMON6	O	DSP monitor output bit 6
69	DSPMNEN	I	DSP monitor output enable
70	CIRSYN	O	Sync signal output for CIR display
71	CTLLR	O	AFC/CIR DAC LR clock
72	CTLCLK	O	AFC/CIR DAC clock
73	CTLDAT	O	AFC/CIR DAC data
74	Vss4	—	Digital Vss
75	VDD3	—	Digital VDD
76	FSY0	O	Frame sync signal output
77	NULDET	I	NULL symbol detected signal input
78	AVss	A	Analog Vss
79	ADVRB	A	ADC bottom-side reference voltage
80	ADIN	A	ADC analog input
81	ADVRT	A	ADC top-side reference voltage
82	AVDD	A	Analog VDD
83	VREF	—	Reference power supply for 5 V input pad
84	IQMOD	I	Digital IQ generation selector input

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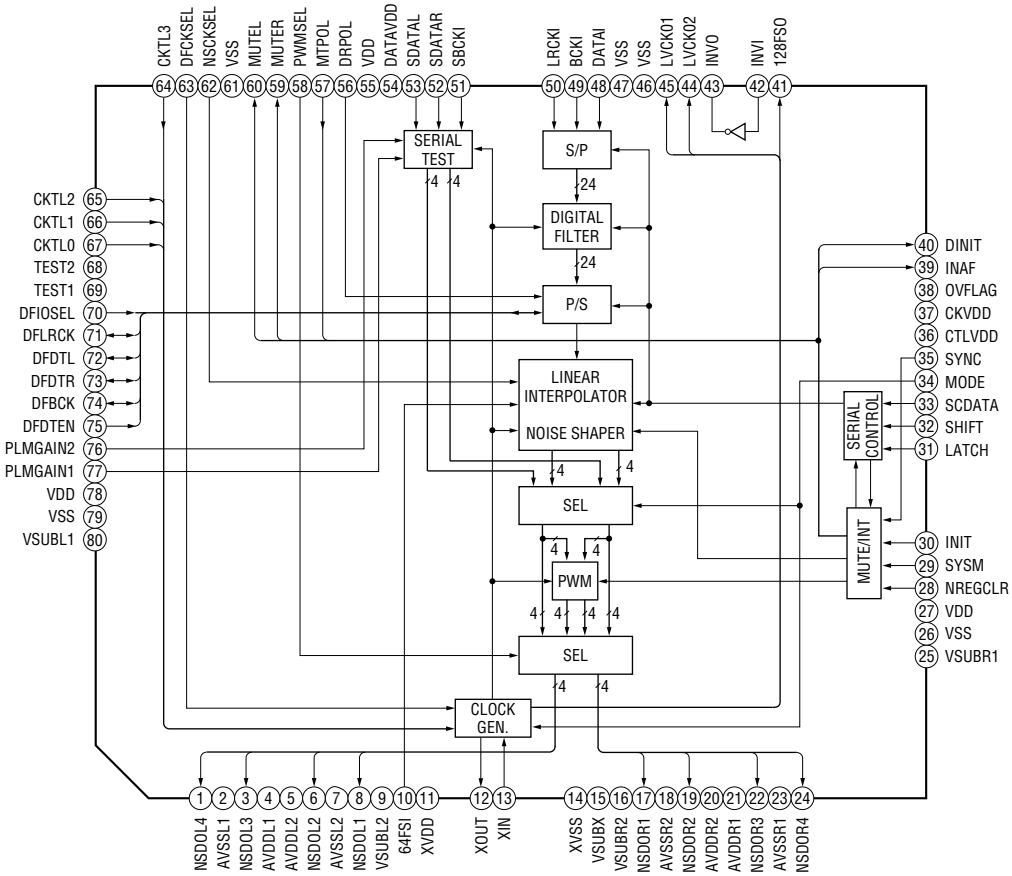
IC601 HD6432237 SYSTEM CONTROL (MAIN BOARD)

Pin No.	Pin Name	I/O	Description
1 – 14	N.C	—	Input output terminal - not used
15	VCC	—	Power supply terminal (+3.3 V)
16	N.C	—	Input output terminal - not used
17	VSS	—	Ground terminal
18 – 28	N.C	—	Input output terminal - not used
29	SDA	I/O	Data input output terminal for EEPROM (HN58X2432)
30	SCL	O	Clock output terminal for EEPROM (HN58X2432)
31	DP-SDA	I/O	Data output terminal to DAM front end
32	DP-SCL	O	Clock output terminal to DAM front end
33	GND	—	Ground terminal
34	AP-DI	O	Data output terminal to FM/AM PLL IC (IC72130)
35	AP-DO	I	Data input terminal from FM/AM PLL IC (IC72130)
36	AP-CL	O	Clock output terminal to FM/AM PLL IC (IC72130)
37	AP-CE	O	Enable terminal to FM/AM PLL IC (IC72130)
38 – 44	N.C	—	Input output terminal - not used
45	GND	—	Ground terminal
46	A-STP	I	Auto stop detection signal input terminal
47	STEREO	I	Stereo detection signal input terminal
48 – 49	N.C	—	Input terminal - not used
50	SIRCS	I	CIRCS signal input terminal
51	GND	—	Input terminal - ground
52	SIGNAL	I	Signal level detection terminal
53	KEY1	I	Key control 1
54	KEY2	I	Key control 2
55	KEY3	I	Key control 3
56	VREF	—	Reference voltage input terminal (+3.3 V)
57	AVCC	—	Power supply terminal (+3.3 V)
58, 59	N.C	—	Mode terminal (fixed at +3.3 V)
60	OSC2	—	Sub-clock input - open
61	OSC1	—	Sub-clock input - fixed at +3.3 V
62	RESET	I	System reset input terminal
63	POWER	I	AC OFF detection input terminal
64	STBY	—	Standby terminal - fixed at +3.3 V
65	VCC	—	Power supply terminal (+3.3 V)
66	XTAL	—	Master clock (10 MHz)
67	VSS	—	Ground terminal
68	EXTAL	—	Master clock (10 MHz)
69	N.C	—	Not used - fixed at ground
70	N.C	—	Mode terminal (fixed at +3.3 V)
71	N.C	—	Not used - fixed at ground
72	AFMUTE	O	Mute control output terminal
73	DF-DA	O	Data output terminal for D/F (CXD8762) control
74	DF-CL	O	Clock output terminal for D/F (CXD8762) control
75	DF-CE	O	Enable output terminal for D/F (CXD8762) control
76	DA-RST	O	Reset output terminal to D/F (CXD8762)
77	DA-MUTE	O	Terminal for D/F (CXD8762) mute control
78	FL-RST	O	Reset output terminal to fluorescence display tube drive IC (MSM9202)
79	FL-DA	O	Data output terminal to fluorescence display tube drive IC (MSM9202)
80	N.C	—	Input terminal - fixed at ground

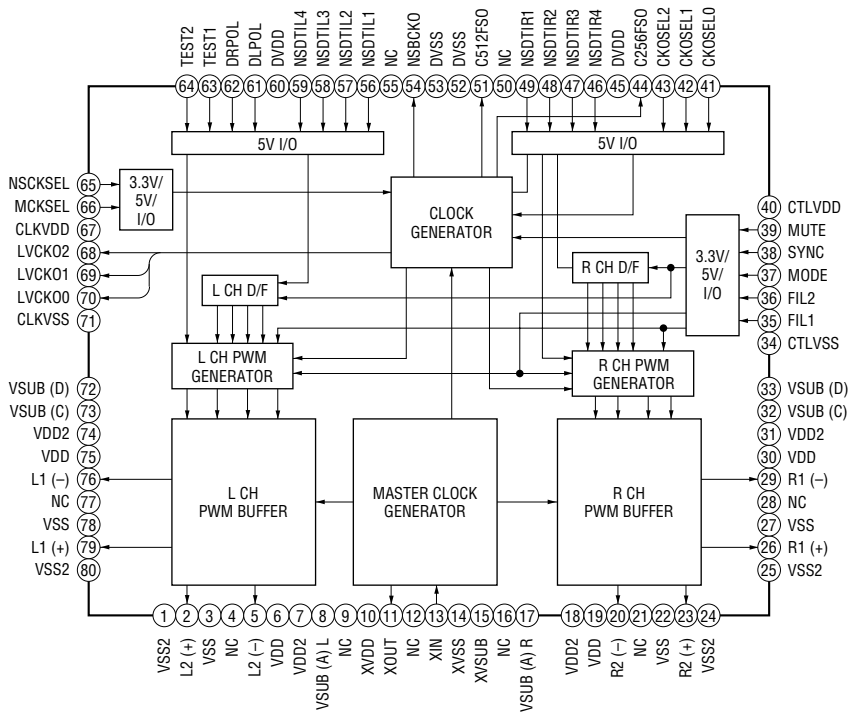
Pin No.	Pin Name	I/O	Description
81	FL-CL	O	Clock output terminal to fluorescence display tube drive IC (MSM9202)
82	FL-ENB1	O	Enable output terminal 1 to fluorescence display tube drive IC (MSM9202)
83	FL-ENB2	O	Enable output terminal 1 to fluorescence display tube drive IC (MSM9202)
84	RD-CL	I	Clock output terminal from RDS demodulation IC (BU1924F)
85	RD-DO	I	Data input terminal from RDS demodulation IC (BU1924F)
86	MPURX	O	Data output terminal to DAB decode IC (MN66710)
87	MPUTX	I	Data input terminal to DAB decode IC (MN66710)
88	MPUCLK	O	Clock output terminal to DAB decode IC (MN66710)
89	MPUMOD	O	Mode select output terminal to DAB decode IC (MN66710)
90	NRST	O	Reset output terminal to DAB decode IC (MN66710)
91 – 93	N.C	—	Output terminal - fixed at ground
94	MPUSYNC	I	Microprocessing operation reference signal input terminal from DAB decode IC (MN66710) (24 ms cycle)
95	MPADRDY	I	Interruption signal for PAD data reading DAB decode IC (MN66710)
96	DAB/FM	O	DAB/FM and AM power supply switching terminal (DAB function at H)
97	TEST	O	Test terminal (display check mode at L)
98 – 100	N.C	—	Output terminal - open

4-13. IC BLOCK DIAGRAMS

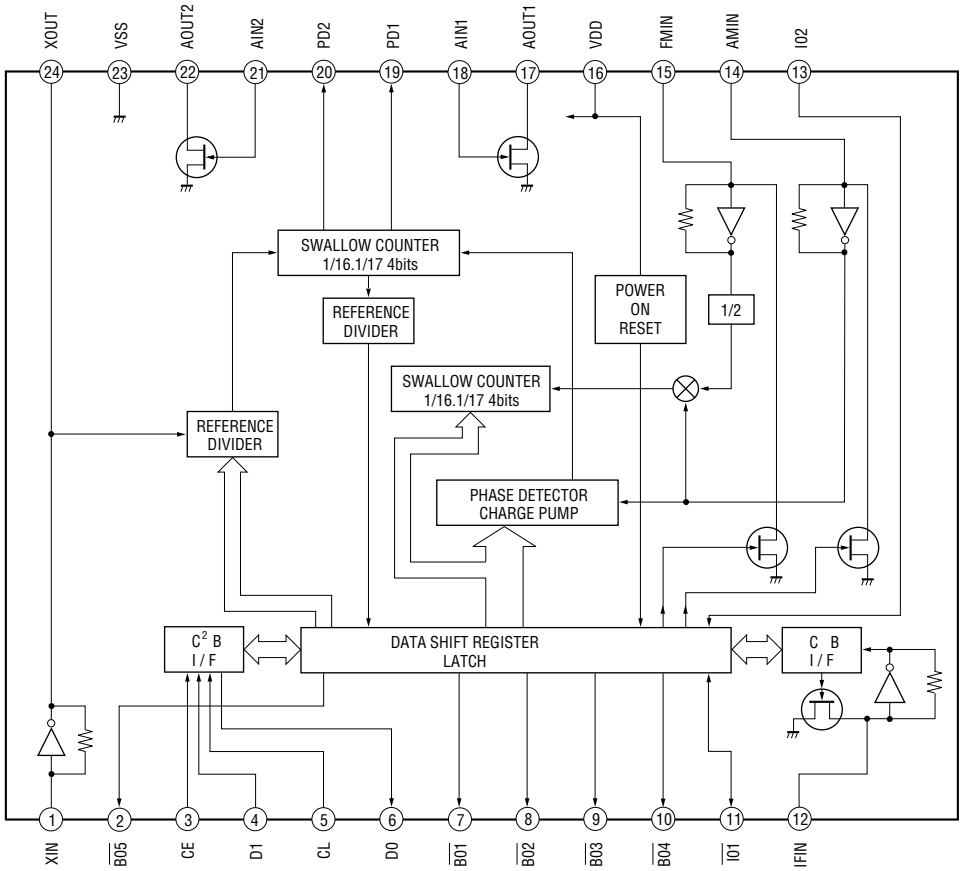
IC501 CXD8762Q (MAIN board)



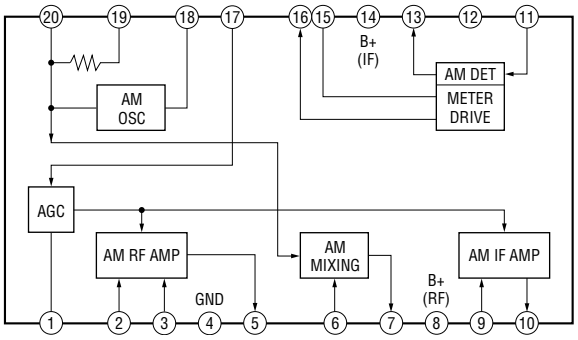
IC502 CXD9521Q (MAIN board)



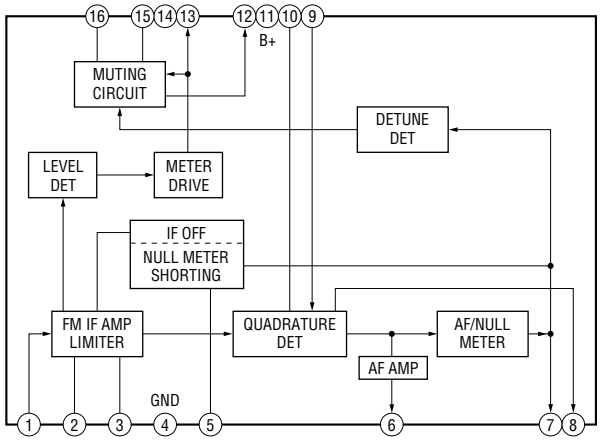
IC201 LC72130 (MAIN board)



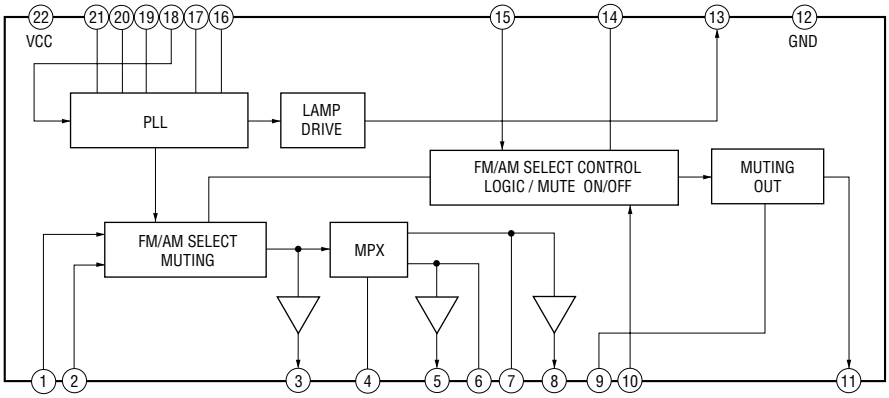
IC202 LA1245 (MAIN board)



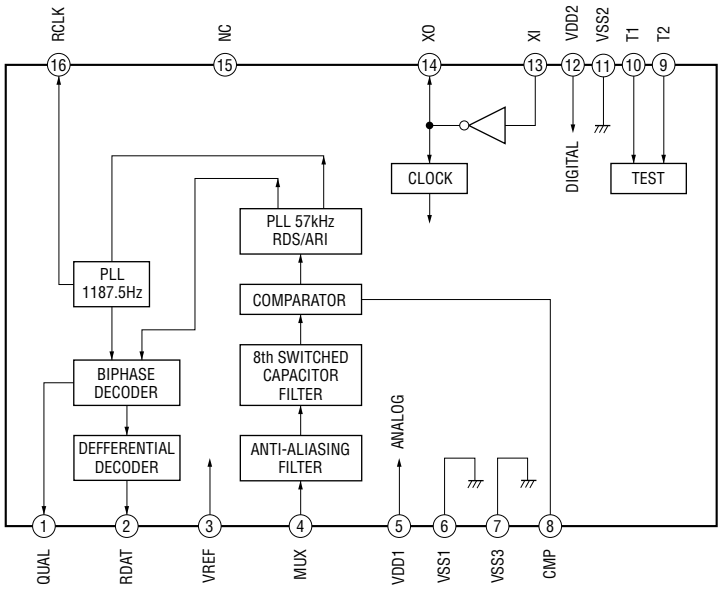
IC203 LA1235 (MAIN board)



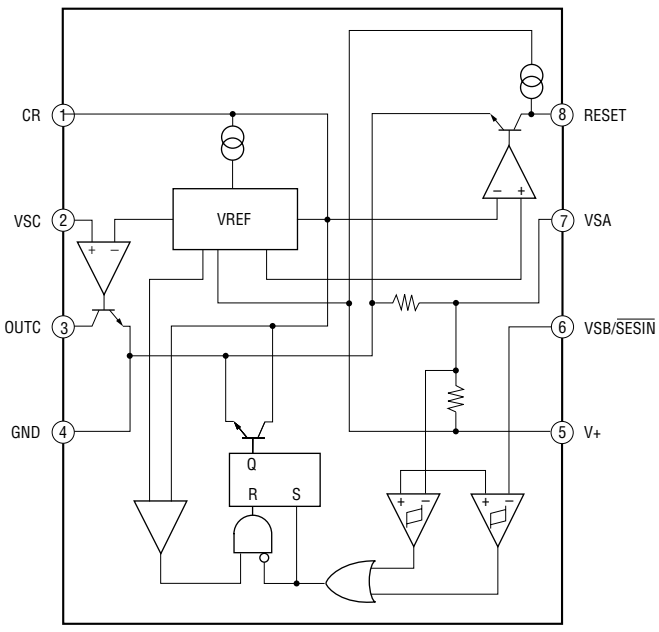
IC301 LA3401 (MAIN board)



IC401 BU1924F (MAIN board)



IC905 NJM2103D (POWER board)



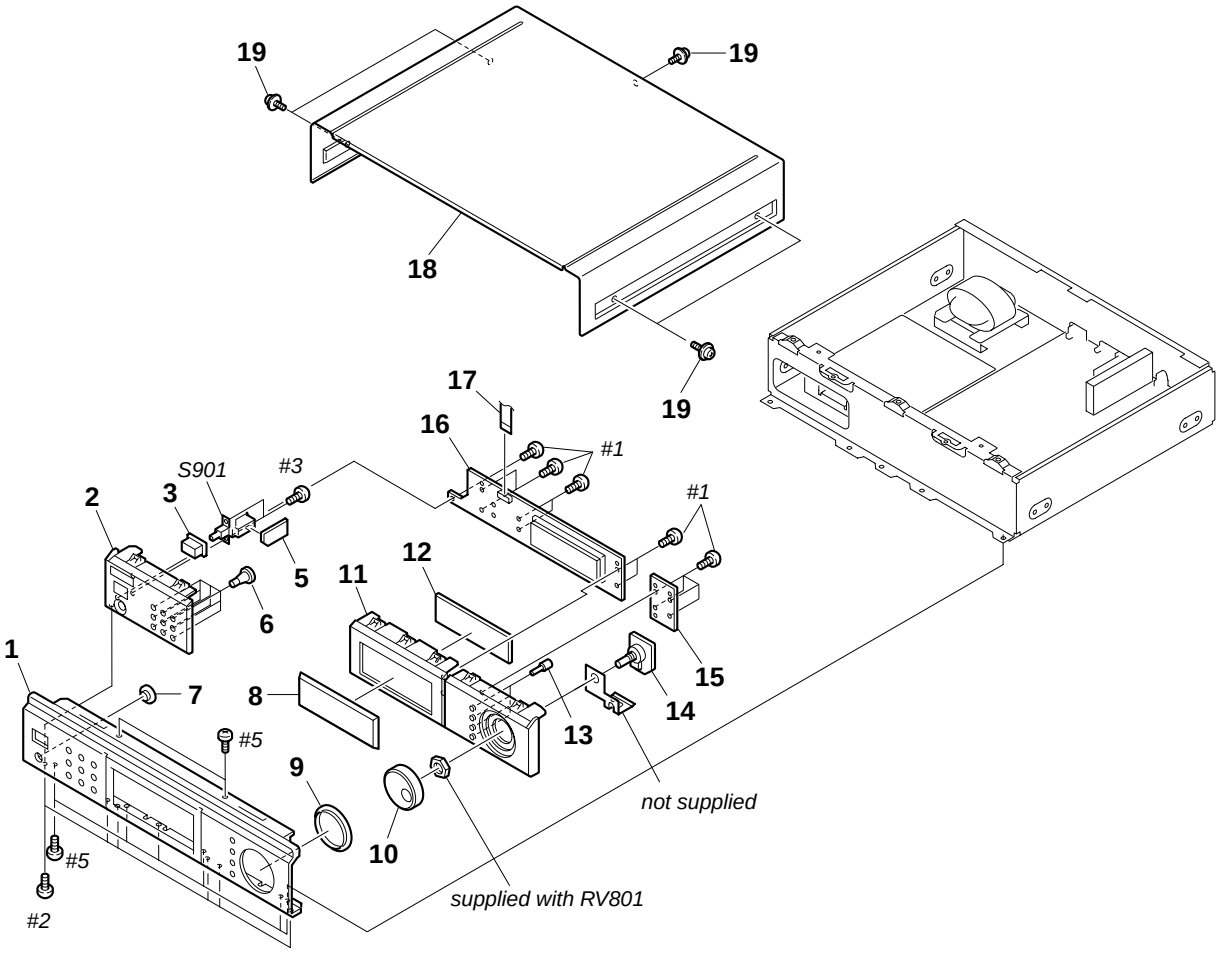
SECTION 5
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

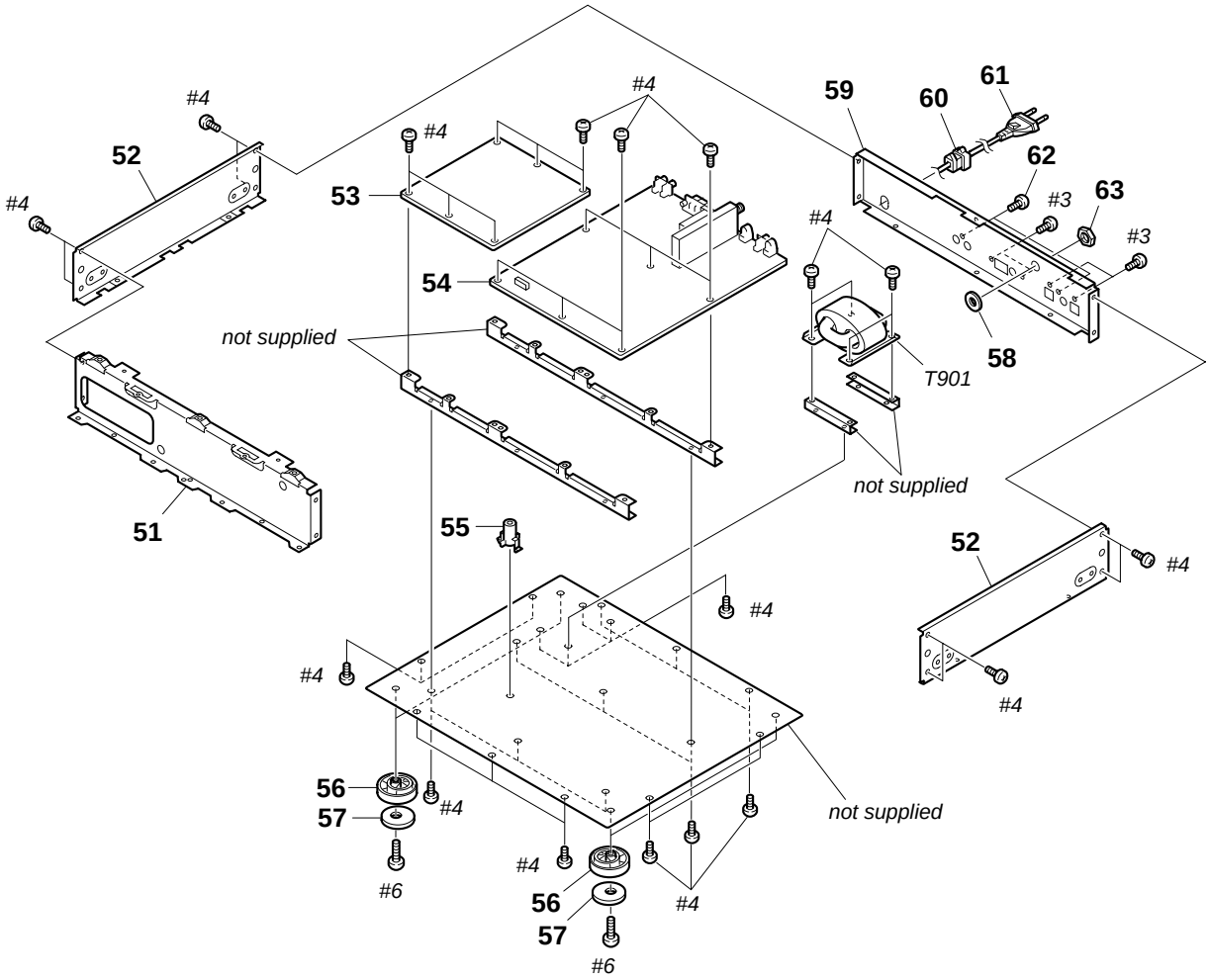
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

5-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	4-226-949-01	PANEL, FRONT	
2	4-226-962-01	BASE(DAB-L), PANEL	
3	4-998-790-51	KNOB,POWER	
5	1-676-330-11	AC SW BOARD	
6	4-220-320-01	BUTTON (EDIT)	
7	4-975-105-31	WINDOW, RAY CATCHER	
8	4-226-950-01	WINDOW (FL)	
9	4-226-960-01	RING(ENCODER), ORNAMENTAL	
10	4-226-959-01	KNOB(ENCODER)	
11	4-226-963-01	BASE(DAB-R), PANEL	
12	4-226-961-01	FILTER (FL)	
13	4-220-317-01	BUTTON (FILTER)	
14	1-676-331-11	ENCODER BOARD	
15	1-676-332-11	KEY SW BOARD	
16	A-4428-524-A	DISPLAY BOARD, COMPLETE	
17	1-792-185-11	WIRE(FLAT TYPE) (15 CORE)	
18	4-226-948-01	UPPER CASE	
19	4-227-843-11	SCREW (TP), FLAT HEAD	
⚠S901	1-572-267-51	SWITCH, PUSH (AC POWER)(1 KEY)(POWER)	

5-2. MAIN SECTION



Ref. No.	Part No.	Description	Remarks
51	4-226-954-01	CHASSIS, SUB	
52	4-226-951-01	CHASSIS (LR)	
53	A-4428-525-A	POWER BOARD, COMPLETE	
54	A-4428-528-A	MAIN BOARD, COMPLETE	
* 55	3-349-025-41	HOLDER, PC BOARD	
56	4-970-123-01	FOOT(F50180S)	
57	4-970-124-01	CUSHION (F50180S)	

Ref. No.	Part No.	Description	Remarks
58	3-657-760-00	WASHER	
59	4-226-953-01	PANEL, BACK	
60	3-703-244-00	BUSHING (2104), CORD	
⚠61	1-575-651-21	CORD, POWER	
62	3-704-515-41	SCREW (BV/RING)	
63	3-682-691-00	NUT,WASHER HEXAGON	
⚠T901	1-435-330-11	TRANSFORMER, POWER	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

AC SW **DISPLAY**

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
	1-676-330-11	AC SW BOARD			
		**********			
		< CONNECTOR >			
⚠CN909	1-769-745-21	LEAD (WITH CONNECTOR) (2 CORE)			
		< SWITCH >			
⚠S901	1-572-267-51	SWITCH, PUSH (AC POWER)(1 KEY)(POWER)			
**********					
	A-4428-524-A	DISPLAY BOARD, COMPLETE			
		**********			
	4-226-964-01	HOLDER (FL)			
*	4-921-941-01	CUSHION (FL)			
	7-685-872-09	SCREW +BVTT	3X8 (S)		
		< CAPACITOR >			
C801	1-128-131-11	ELECT	22uF	20.00% 50V	
C802	1-128-131-11	ELECT	22uF	20.00% 50V	
C803	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C804	1-124-584-00	ELECT	100uF	20% 10V	
C805	1-124-584-00	ELECT	100uF	20% 10V	
C806	1-128-131-11	ELECT	22uF	20.00% 50V	
C807	1-164-159-11	CERAMIC	0.1uF	50V	
C808	1-164-159-11	CERAMIC	0.1uF	50V	
C811	1-162-213-31	CERAMIC	39PF	5.00% 50V	
C840	1-162-282-31	CERAMIC	100PF	10% 50V	
C841	1-162-282-31	CERAMIC	100PF	10% 50V	
C842	1-162-288-31	CERAMIC	330PF	10% 50V	
C843	1-162-288-31	CERAMIC	330PF	10% 50V	
		< CONNECTOR >			
CN801	1-784-737-11	CONNECTOR, FFC 15P			
CN802	1-770-480-11	SOCKET, CONNECTOR PIN 4P			
		< FILTER >			
FL801	1-517-950-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC801	8-749-013-92	IC GP1UC7X			
IC802	8-759-596-83	IC MSM9202-05			
IC803	8-759-596-83	IC MSM9202-05			

Ref. No.	Part No.	Description			Remarks
		< TRANSISTOR >			
Q801	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q802	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q803	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q804	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q805	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q806	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
		< RESISTOR >			
R801	1-249-437-11	CARBON	47K	5% 1/4W	
R802	1-249-437-11	CARBON	47K	5% 1/4W	
R803	1-249-437-11	CARBON	47K	5% 1/4W	
R804	1-249-437-11	CARBON	47K	5% 1/4W	
R805	1-249-437-11	CARBON	47K	5% 1/4W	
R806	1-249-437-11	CARBON	47K	5% 1/4W	
R807	1-249-417-11	CARBON	1K	5% 1/4W	F
R808	1-247-807-31	CARBON	100	5% 1/4W	
R809	1-247-843-11	CARBON	3.3K	5% 1/4W	
R811	1-249-425-11	CARBON	4.7K	5% 1/4W	F
R812	1-249-427-11	CARBON	6.8K	5% 1/4W	F
R813	1-249-429-11	CARBON	10K	5% 1/4W	
R814	1-249-433-11	CARBON	22K	5% 1/4W	
R821	1-249-425-11	CARBON	4.7K	5% 1/4W	F
R822	1-249-427-11	CARBON	6.8K	5% 1/4W	F
R823	1-249-429-11	CARBON	10K	5% 1/4W	
R824	1-249-433-11	CARBON	22K	5% 1/4W	
R840	1-247-807-31	CARBON	100	5% 1/4W	
R841	1-247-807-31	CARBON	100	5% 1/4W	
R842	1-247-807-31	CARBON	100	5% 1/4W	
R843	1-247-807-31	CARBON	100	5% 1/4W	
		< SWITCH >			
S801	1-762-875-21	SWITCH, KEYBOARD (DAB)			
S802	1-762-875-21	SWITCH, KEYBOARD (EON)			
S803	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)			
S804	1-762-875-21	SWITCH, KEYBOARD (DISPLAY MODE)			
S805	1-762-875-21	SWITCH, KEYBOARD (MONO/ST)			
S806	1-762-875-21	SWITCH, KEYBOARD (FM)			
S807	1-762-875-21	SWITCH, KEYBOARD (AM)			
S808	1-762-875-21	SWITCH, KEYBOARD (MEMORY)			
S809	1-762-875-21	SWITCH, KEYBOARD (CHARACTER)			
**********					

Ref. No.	Part No.	Description				Remarks
	1-676-331-11	ENCODER BOARD				
		**********				
		< VARIABLE RESISTOR >				
RV801	1-466-336-21	ENCODER, ROTARY (TUNING/SELECT)				
**********						
	1-676-332-11	KEY SW BOARD				
		**********				
		< CAPACITOR >				
C809	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C810	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
		< CONNECTOR >				
CN804	1-779-495-11	PLUG, CONNECTOR PIN 4P				
CN805	1-506-468-11	PIN, CONNECTOR 3P				
		< RESISTOR >				
R831	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R832	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R833	1-249-429-11	CARBON	10K	5%	1/4W	
R834	1-249-433-11	CARBON	22K	5%	1/4W	
		< SWITCH >				
S810	1-762-875-21	SWITCH, KEYBOARD (TUNING MODE)				
S811	1-762-875-21	SWITCH, KEYBOARD (PTY)				
S812	1-762-875-21	SWITCH, KEYBOARD (MENU)				
S813	1-762-875-21	SWITCH, KEYBOARD (ENTER)				
**********						
	A-4428-528-A	MAIN BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C102	1-119-824-11	ELECT MELF	10uF	20%	50V	
C103	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C104	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C105	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C106	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C107	1-119-824-11	ELECT MELF	10uF	20%	50V	
C108	1-164-159-11	CERAMIC	0.1uF		50V	
C109	1-164-159-11	CERAMIC	0.1uF		50V	
C110	1-162-209-31	CERAMIC	27PF	5.00%	50V	
C111	1-164-159-11	CERAMIC	0.1uF		50V	
C112	1-164-159-11	CERAMIC	0.1uF		50V	
C115	1-128-834-11	ELECT	470uF	20%	10V	
C117	1-162-203-31	CERAMIC	15PF	5.00%	50V	
C118	1-164-159-11	CERAMIC	0.1uF		50V	
C119	1-164-159-11	CERAMIC	0.1uF		50V	
C120	1-164-159-11	CERAMIC	0.1uF		50V	
C121	1-164-159-11	CERAMIC	0.1uF		50V	
C122	1-164-159-11	CERAMIC	0.1uF		50V	
C123	1-164-159-11	CERAMIC	0.1uF		50V	
C124	1-164-159-11	CERAMIC	0.1uF		50V	
C125	1-164-159-11	CERAMIC	0.1uF		50V	
C126	1-164-159-11	CERAMIC	0.1uF		50V	
C127	1-127-718-91	ELECT MELF	100uF	20%	16V	
C128	1-128-835-91	ELECT	1000uF	20%	10V	
C129	1-164-159-11	CERAMIC	0.1uF		50V	

Ref. No.	Part No.	Description			Remarks
C130	1-128-840-11	ELECT	47uF	20%	16V
C131	1-128-840-11	ELECT	47uF	20%	16V
C132	1-162-219-31	CERAMIC	68PF	5.00%	50V
C133	1-128-840-11	ELECT	47uF	20%	16V
C134	1-127-721-11	ELECT	1000uF	20%	16V
C135	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C136	1-119-820-11	ELECT	1uF	20%	50V
C137	1-128-835-91	ELECT	1000uF	20%	10V
C201	1-162-211-31	CERAMIC	33PF	5%	50V
C202	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C203	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C204	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C205	1-136-161-00	MYLAR	0.047uF	5.00%	50V
C206	1-102-973-00	CERAMIC	100PF	5%	50V
C207	1-102-508-91	CERAMIC	10PF	0.50PF	50V
C208	1-102-518-11	CERAMIC	33PF	5.00%	50V
C209	1-102-516-11	CERAMIC	27PF	5.00%	50V
C210	1-164-159-11	CERAMIC	0.1uF		50V
C211	1-119-824-11	ELECT MELF	10uF	20%	50V
C212	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C213	1-119-821-11	ELECT MELF	2.2uF	20%	50V
C214	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C215	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C216	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C217	1-162-211-31	CERAMIC	33PF	5%	50V
C218	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C219	1-128-840-11	ELECT	47uF	20%	16V
C220	1-128-840-11	ELECT	47uF	20%	16V
C221	1-119-817-11	ELECT	0.22uF	20.00%	50V
C222	1-128-840-11	ELECT	47uF	20%	16V
C223	1-119-820-11	ELECT	1uF	20%	50V
C224	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C225	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C226	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C227	1-119-820-11	ELECT	1uF	20%	50V
C228	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C229	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C230	1-128-840-11	ELECT	47uF	20%	16V
C231	1-162-282-31	CERAMIC	100PF	10%	50V
C232	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C233	1-162-294-31	CERAMIC	0.001uF	10%	50V
C234	1-128-840-11	ELECT	47uF	20%	16V
C235	1-119-820-11	ELECT	1uF	20%	50V
C236	1-162-294-31	CERAMIC	0.001uF	10%	50V
C237	1-128-856-11	ELECT	3.3uF	20%	50V
C238	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C239	1-162-282-31	CERAMIC	100PF	10%	50V
C240	1-130-471-00	MYLAR	0.001uF	5%	50V
C241	1-162-294-31	CERAMIC	0.001uF	10%	50V
C242	1-162-294-31	CERAMIC	0.001uF	10%	50V
C243	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C244	1-162-294-31	CERAMIC	0.001uF	10%	50V
C245	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C246	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C247	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C248	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C249	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C250	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C251	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C252	1-162-306-11	CERAMIC	0.01uF	30.00%	16V

MAIN

Ref. No.	Part No.	Description			Remarks
C253	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C254	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C255	1-128-854-11	ELECT	0.47uF	20%	50V
C256	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C257	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C258	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C259	1-128-840-11	ELECT	47uF	20%	16V
C260	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C261	1-128-840-11	ELECT	47uF	20%	16V
C262	1-164-159-11	CERAMIC	0.1uF		50V
C263	1-164-159-11	CERAMIC	0.1uF		50V
C264	1-136-355-11	MYLAR	330PF	5.00%	50V
C265	1-130-467-00	MYLAR	470PF	5%	50V
C266	1-119-820-11	ELECT	1uF	20%	50V
C267	1-162-294-31	CERAMIC	0.001uF	10%	50V
C268	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C301	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C302	1-162-294-31	CERAMIC	0.001uF	10%	50V
C303	1-162-294-31	CERAMIC	0.001uF	10%	50V
C304	1-162-282-31	CERAMIC	100PF	10%	50V
C305	1-162-288-31	CERAMIC	330PF	10%	50V
C306	1-136-161-00	MYLAR	0.047uF	5.00%	50V
C307	1-128-840-11	ELECT	47uF	20%	16V
C308	1-136-161-00	MYLAR	0.047uF	5.00%	50V
C309	1-128-840-11	ELECT	47uF	20%	16V
C310	1-128-854-11	ELECT	0.47uF	20%	50V
C311	1-119-820-11	ELECT	1uF	20%	50V
C312	1-128-840-11	ELECT	47uF	20%	16V
C313	1-119-820-11	ELECT	1uF	20%	50V
C314	1-119-820-11	ELECT	1uF	20%	50V
C315	1-119-820-11	ELECT	1uF	20%	50V
C316	1-130-469-00	MYLAR	680PF	5%	50V
C317	1-130-469-00	MYLAR	680PF	5%	50V
C318	1-130-475-00	MYLAR	0.0022uF	5%	50V
C319	1-130-475-00	MYLAR	0.0022uF	5%	50V
C320	1-119-824-11	ELECT MELF	10uF	20%	50V
C321	1-119-824-11	ELECT MELF	10uF	20%	50V
C322	1-110-335-11	MYLAR	100PF	5.00%	50V
C323	1-110-335-11	MYLAR	100PF	5.00%	50V
C324	1-127-719-91	ELECT MELF	220uF	20%	16V
C325	1-119-823-11	ELECT	4.7uF	20%	50V
C326	1-119-823-11	ELECT	4.7uF	20%	50V
C327	1-130-471-00	MYLAR	0.001uF	5%	50V
C328	1-130-471-00	MYLAR	0.001uF	5%	50V
C401	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C402	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C403	1-162-288-31	CERAMIC	330PF	10%	50V
C404	1-162-291-31	CERAMIC	560PF	10.00%	50V
C405	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C406	1-119-821-11	ELECT MELF	2.2uF	20%	50V
C407	1-128-840-11	ELECT	47uF	20%	16V
C408	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C409	1-102-852-91	CERAMIC	47PF	5.00%	50V
C410	1-102-527-11	CERAMIC	82PF	5.00%	50V
C501	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C502	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C503	1-119-810-11	ELECT	100uF	20.00%	35V
C504	1-119-810-11	ELECT	100uF	20.00%	35V
C505	1-162-294-31	CERAMIC	0.001uF	10%	50V
C506	1-162-288-31	CERAMIC	330PF	10%	50V

Ref. No.	Part No.	Description			Remarks
C507	1-162-288-31	CERAMIC	330PF	10%	50V
C508	1-162-294-31	CERAMIC	0.001uF	10%	50V
C509	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C510	1-119-810-11	ELECT	100uF	20.00%	35V
C511	1-119-810-11	ELECT	100uF	20.00%	35V
C512	1-119-810-11	ELECT	100uF	20.00%	35V
C513	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C514	1-164-159-11	CERAMIC	0.1uF		50V
C515	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C516	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C517	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C518	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C519	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C520	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C521	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C522	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C523	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C524	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C525	1-119-813-11	ELECT	470uF	20.00%	35V
C526	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C527	1-119-810-11	ELECT	100uF	20.00%	35V
C528	1-119-808-11	ELECT	33uF	20.00%	35V
C529	1-128-201-11	ELECT	100uF	20.00%	63V
C530	1-136-356-11	FILM	470PF	5.00%	100V
C531	1-128-970-11	ELECT	100uF	20%	50V
C532	1-128-970-11	ELECT	100uF	20%	50V
C533	1-136-356-11	FILM	470PF	5.00%	100V
C534	1-136-810-11	FILM	220PF	5.00%	100V
C535	1-136-810-11	FILM	220PF	5.00%	100V
C536	1-136-810-11	FILM	220PF	5.00%	100V
C537	1-136-810-11	FILM	220PF	5.00%	100V
C538	1-136-810-11	FILM	220PF	5.00%	100V
C539	1-136-810-11	FILM	220PF	5.00%	100V
C540	1-136-810-11	FILM	220PF	5.00%	100V
C541	1-128-970-11	ELECT	100uF	20%	50V
C543	1-136-818-11	FILM	0.0047uF	5.00%	100V
C544	1-136-818-11	FILM	0.0047uF	5.00%	100V
C545	1-136-814-11	FILM	0.001uF	5.00%	100V
C547	1-128-970-11	ELECT	100uF	20%	50V
C549	1-128-970-11	ELECT	100uF	20%	50V
C551	1-128-970-11	ELECT	100uF	20%	50V
C552	1-136-810-11	FILM	220PF	5.00%	100V
C553	1-119-810-11	ELECT	100uF	20.00%	35V
C554	1-119-810-11	ELECT	100uF	20.00%	35V
C555	1-127-718-91	ELECT MELF	100uF	20%	16V
C556	1-119-810-11	ELECT	100uF	20.00%	35V
C557	1-119-810-11	ELECT	100uF	20.00%	35V
C558	1-119-810-11	ELECT	100uF	20.00%	35V
C559	1-119-810-11	ELECT	100uF	20.00%	35V
C560	1-119-810-11	ELECT	100uF	20.00%	35V
C561	1-119-810-11	ELECT	100uF	20.00%	35V
C562	1-119-810-11	ELECT	100uF	20.00%	35V
C563	1-136-814-11	FILM	0.001uF	5.00%	100V
C564	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C565	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C566	1-162-211-31	CERAMIC	33PF	5%	50V
C567	1-162-294-31	CERAMIC	0.001uF	10%	50V
C601	1-164-159-11	CERAMIC	0.1uF		50V
C602	1-164-159-11	CERAMIC	0.1uF		50V
C604	1-162-306-11	CERAMIC	0.01uF	30.00%	16V

Ref. No.	Part No.	Description			Remarks
C605	1-127-718-91	ELECT MELF	100uF	20%	16V
C607	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C608	1-127-718-91	ELECT MELF	100uF	20%	16V
C609	1-164-159-11	CERAMIC	0.1uF		50V
C610	1-164-159-11	CERAMIC	0.1uF		50V
C611	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C612	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C613	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
		< FILTER >			
CF201	1-527-981-00	FILTER, CERAMIC			
CF202	1-567-389-11	FILTER, CERAMIC			
CF203	1-567-389-11	FILTER, CERAMIC			
CF204	1-567-389-11	FILTER, CERAMIC			
CF205	1-579-554-31	FILTER, CERAMIC			
CF301	1-567-250-11	OSCILLATOR, CERAMIC			
		< CONNECTOR >			
CN701	1-766-205-11	PLUG, CONNECTOR PIN 14P			
CN702	1-766-204-11	PLUG, CONNECTOR PIN 11P			
CN704	1-784-776-11	CONNECTOR, FFC 15P			
		< DIODE >			
D201	8-719-911-19	DIODE 1SS133T-72			
D202	8-719-911-19	DIODE 1SS133T-72			
D203	8-719-210-21	DIODE 11EQS04-TA2B			
D204	8-719-210-21	DIODE 11EQS04-TA2B			
D301	8-719-911-19	DIODE 1SS133T-72			
D302	8-719-911-19	DIODE 1SS133T-72			
D501	8-719-947-12	DIODE MTZJ-T-72-4.7A			
D502	8-719-911-19	DIODE 1SS133T-72			
D503	8-719-911-19	DIODE 1SS133T-72			
D601	8-719-210-21	DIODE 11EQS04-TA2B			
D602	8-719-210-21	DIODE 11EQS04-TA2B			
		< FERRITE BEAD >			
FB101	1-410-397-21	FERRITE BEAD INDUCTOR			
FB102	1-410-397-21	FERRITE BEAD INDUCTOR			
FB502	1-410-396-41	INDUCTOR	0.45UH		
FB503	1-410-396-41	INDUCTOR	0.45UH		
FB504	1-410-396-41	INDUCTOR	0.45UH		
FB505	1-410-396-41	INDUCTOR	0.45UH		
		< FRONT END >			
FE101	1-693-492-11	FRONT END (DAB)			
FE201	1-233-525-11	ENCAPSULATED COMPONENT			
FE202	1-693-212-11	FRONT END (FTZ)			
		< IC >			
IC101	8-759-262-03	IC MC14577CFEL			
IC102	8-759-357-68	IC NJM2115M-TE2			
IC103	8-759-377-65	IC LC78817M-TE-L			
IC104	8-759-659-08	IC MN66710			
IC105	8-759-576-67	IC MSM514400D-60TS-K			
IC106	8-759-445-59	IC BA033T			
IC107	8-759-233-66	IC TC74HCT04AF-TP1			
IC108	8-749-016-00	IC HVE0024 (DAB DIGITAL OUT)			
IC109	8-749-016-00	IC HVE0024 (DAB RDI OUT)			
IC110	8-759-231-53	IC M5F7805L			

Ref. No.	Part No.	Description	Remarks
IC201	8-759-288-54	IC LC72130	
IC202	8-759-812-45	IC LA1245	
IC203	8-759-812-35	IC LA1235	
IC301	8-759-801-80	IC LA3401	
IC302	8-759-100-96	IC NJM4558M-TE2	
IC401	8-759-557-36	IC BU1924F-E2	
IC501	8-759-573-17	IC CXD8762AQ	
IC502	8-759-596-81	IC CXD9521Q	
IC503	8-759-231-53	IC M5F7805L	
IC504	8-759-708-05	IC NJM78L05A-T1	
IC505	8-759-111-44	IC uPC4570C-1	
IC506	8-759-111-44	IC uPC4570C-1	
IC507	8-759-712-02	IC NJM2114D	
IC508	8-759-712-02	IC NJM2114D	
IC601	8-759-659-09	IC HD6472237F10	
IC602	8-759-659-10	IC HN58X2432-FPIZ	
IC603	8-759-238-47	IC TC74HCT7007AF(EL)	
		< IFT >	
IFT201	1-404-713-11	TRANSFORMER, IF	
IFT202	1-404-845-11	COIL, DISCRI (PRIMARY)	
IFT203	1-404-846-11	COIL, DISCRI (SECONDARY)	
		< JACK >	
J101	1-568-750-21	JACK, PIN (1P SHIELD TYPE)	(DAB DIGITAL OUT)
		< COIL >	
L201	1-414-142-11	INDUCTOR 1uH	
L202	1-410-521-11	INDUCTOR 100uH	
L301	1-410-509-11	INDUCTOR 10uH	
L302	1-410-509-11	INDUCTOR 10uH	
L501	1-410-482-31	INDUCTOR 100uH	
		< FILTER >	
LPF301	1-235-164-00	FILTER, LOW PASS	
LPF302	1-235-164-00	FILTER, LOW PASS	
		< JACK >	
PJ501	1-568-751-61	JACK, PIN (2P SHIELD TYPE)(ANALOG OUT)	
		< TRANSISTOR >	
Q201	8-729-030-02	TRANSISTOR DTC144ESA-TP	
Q202	8-729-216-13	TRANSISTOR 2SK161GR-TPE4	
Q203	8-729-922-37	TRANSISTOR 2SD2144S-TP-UVW	
Q204	8-729-922-37	TRANSISTOR 2SD2144S-TP-UVW	
Q205	8-729-922-37	TRANSISTOR 2SD2144S-TP-UVW	
Q206	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4	
Q207	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4	
Q208	8-729-030-02	TRANSISTOR DTC144ESA-TP	
Q209	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4	
Q210	8-729-026-39	TRANSISTOR 2SA933AS-QRT	
Q211	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4	
Q212	8-729-119-78	TRANSISTOR 2SC1740S-QRT	
Q213	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4	
Q214	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4	
Q215	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4	

MAIN

Ref. No.	Part No.	Description				Remarks
Q216	8-729-230-99	TRANSISTOR	2SC2669OY-TPE4			
Q301	8-729-029-56	TRANSISTOR	DTA144ESA-TP			
Q302	8-729-230-99	TRANSISTOR	2SC2669OY-TPE4			
Q303	8-729-922-37	TRANSISTOR	2SD2144S-TP-UVW			
Q304	8-729-922-37	TRANSISTOR	2SD2144S-TP-UVW			
Q305	8-729-922-37	TRANSISTOR	2SD2144S-TP-UVW			
Q306	8-729-922-37	TRANSISTOR	2SD2144S-TP-UVW			
Q401	8-729-119-78	TRANSISTOR	2SC1740S-QRT			
Q501	8-729-030-02	TRANSISTOR	DTC144ESA-TP			
Q502	8-729-922-37	TRANSISTOR	2SD2144S-TP-UVW			
Q503	8-729-029-40	TRANSISTOR	DTA124ESA-TP			
Q504	8-729-922-37	TRANSISTOR	2SD2144S-TP-UVW			
		< RESISTOR >				
R101	1-249-417-11	CARBON	1K	5%	1/4W	F
R102	1-249-417-11	CARBON	1K	5%	1/4W	F
R103	1-249-417-11	CARBON	1K	5%	1/4W	F
R104	1-249-417-11	CARBON	1K	5%	1/4W	F
R105	1-249-415-11	CARBON	680	5%	1/4W	F
R106	1-249-417-11	CARBON	1K	5%	1/4W	F
R107	1-247-807-31	CARBON	100	5%	1/4W	
R109	1-249-437-11	CARBON	47K	5%	1/4W	
R110	1-249-437-11	CARBON	47K	5%	1/4W	
R113	1-249-417-11	CARBON	1K	5%	1/4W	F
R114	1-249-435-11	CARBON	33K	5%	1/4W	
R116	1-249-441-11	CARBON	100K	5%	1/4W	
R118	1-249-417-11	CARBON	1K	5%	1/4W	F
R119	1-249-411-11	CARBON	330	5%	1/4W	
R120	1-247-807-31	CARBON	100	5%	1/4W	
R121	1-249-429-11	CARBON	10K	5%	1/4W	
R123	1-249-417-11	CARBON	1K	5%	1/4W	F
R124	1-249-417-11	CARBON	1K	5%	1/4W	F
R201	1-249-403-11	CARBON	68	5%	1/4W	F
R202	1-249-395-11	CARBON	15	5%	1/4W	F
R203	1-249-403-11	CARBON	68	5%	1/4W	F
R204	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R205	1-249-417-11	CARBON	1K	5%	1/4W	F
R206	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R207	1-249-441-11	CARBON	100K	5%	1/4W	
R208	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R209	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R210	1-247-807-31	CARBON	100	5%	1/4W	
R211	1-249-429-11	CARBON	10K	5%	1/4W	
R212	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R213	1-249-429-11	CARBON	10K	5%	1/4W	
R214	1-249-429-11	CARBON	10K	5%	1/4W	
R215	1-247-843-11	CARBON	3.3K	5%	1/4W	
R216	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R217	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R218	1-249-429-11	CARBON	10K	5%	1/4W	
R219	1-249-417-11	CARBON	1K	5%	1/4W	F
R220	1-249-429-11	CARBON	10K	5%	1/4W	
R221	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R222	1-249-426-11	CARBON	5.6K	5%	1/4W	
R223	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R224	1-249-429-11	CARBON	10K	5%	1/4W	
R225	1-249-393-11	CARBON	10	5%	1/4W	F
R226	1-247-807-31	CARBON	100	5%	1/4W	
R227	1-249-429-11	CARBON	10K	5%	1/4W	

Ref. No.	Part No.	Description				Remarks
R228	1-247-807-31	CARBON	100	5%	1/4W	
R229	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R230	1-249-409-11	CARBON	220	5%	1/4W	F
R231	1-249-429-11	CARBON	10K	5%	1/4W	
R232	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R233	1-249-413-11	CARBON	470	5%	1/4W	F
R234	1-249-415-11	CARBON	680	5%	1/4W	F
R235	1-249-417-11	CARBON	1K	5%	1/4W	F
R236	1-249-417-11	CARBON	1K	5%	1/4W	F
R237	1-249-430-11	CARBON	12K	5%	1/4W	
R238	1-249-429-11	CARBON	10K	5%	1/4W	
R239	1-249-433-11	CARBON	22K	5%	1/4W	
R240	1-249-407-11	CARBON	150	5%	1/4W	F
R241	1-249-433-11	CARBON	22K	5%	1/4W	
R242	1-247-883-00	CARBON	150K	5%	1/4W	
R243	1-249-437-11	CARBON	47K	5%	1/4W	
R244	1-249-437-11	CARBON	47K	5%	1/4W	
R245	1-249-417-11	CARBON	1K	5%	1/4W	F
R246	1-249-393-11	CARBON	10	5%	1/4W	F
R247	1-249-411-11	CARBON	330	5%	1/4W	
R248	1-249-417-11	CARBON	1K	5%	1/4W	F
R249	1-249-393-11	CARBON	10	5%	1/4W	F
R250	1-249-441-11	CARBON	100K	5%	1/4W	
R251	1-249-431-11	CARBON	15K	5%	1/4W	
R252	1-249-411-11	CARBON	330	5%	1/4W	
R253	1-249-409-11	CARBON	220	5%	1/4W	F
R254	1-249-411-11	CARBON	330	5%	1/4W	
R255	1-249-411-11	CARBON	330	5%	1/4W	
R256	1-249-433-11	CARBON	22K	5%	1/4W	
R257	1-249-405-11	CARBON	100	5%	1/4W	F
R258	1-247-843-11	CARBON	3.3K	5%	1/4W	
R259	1-249-433-11	CARBON	22K	5%	1/4W	
R260	1-249-431-11	CARBON	15K	5%	1/4W	
R261	1-249-411-11	CARBON	330	5%	1/4W	
R262	1-249-411-11	CARBON	330	5%	1/4W	
R263	1-249-411-11	CARBON	330	5%	1/4W	
R264	1-249-433-11	CARBON	22K	5%	1/4W	
R265	1-249-405-11	CARBON	100	5%	1/4W	F
R266	1-249-411-11	CARBON	330	5%	1/4W	
R267	1-249-411-11	CARBON	330	5%	1/4W	
R268	1-247-804-11	CARBON	75	5%	1/4W	
R269	1-249-417-11	CARBON	1K	5%	1/4W	F
R270	1-249-431-11	CARBON	15K	5%	1/4W	
R271	1-249-417-11	CARBON	1K	5%	1/4W	F
R272	1-249-405-11	CARBON	100	5%	1/4W	F
R273	1-249-411-11	CARBON	330	5%	1/4W	
R274	1-249-413-11	CARBON	470	5%	1/4W	F
R275	1-247-807-31	CARBON	100	5%	1/4W	
R276	1-247-807-31	CARBON	100	5%	1/4W	
R277	1-249-413-11	CARBON	470	5%	1/4W	F
R278	1-249-429-11	CARBON	10K	5%	1/4W	
R279	1-249-441-11	CARBON	100K	5%	1/4W	
R280	1-249-437-11	CARBON	47K	5%	1/4W	
R281	1-249-439-11	CARBON	68K	5%	1/4W	
R282	1-249-413-11	CARBON	470	5%	1/4W	F
R283	1-249-439-11	CARBON	68K	5%	1/4W	
R284	1-249-437-11	CARBON	47K	5%	1/4W	
R285	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R286	1-249-405-11	CARBON	100	5%	1/4W	F
R287	1-249-424-11	CARBON	3.9K	5%	1/4W	F

Ref. No.	Part No.	Description			Remarks
R288	1-249-432-11	CARBON	18K	5%	1/4W
R289	1-249-421-11	CARBON	2.2K	5%	1/4W F
R290	1-249-422-11	CARBON	2.7K	5%	1/4W F
R291	1-249-441-11	CARBON	100K	5%	1/4W
R292	1-249-431-11	CARBON	15K	5%	1/4W
R301	1-247-883-00	CARBON	150K	5%	1/4W
R302	1-249-437-11	CARBON	47K	5%	1/4W
R303	1-249-437-11	CARBON	47K	5%	1/4W
R304	1-249-417-11	CARBON	1K	5%	1/4W F
R305	1-249-417-11	CARBON	1K	5%	1/4W F
R306	1-249-437-11	CARBON	47K	5%	1/4W
R307	1-249-421-11	CARBON	2.2K	5%	1/4W F
R308	1-212-865-00	FUSIBLE	22	5%	1/4W
R310	1-249-426-11	CARBON	5.6K	5%	1/4W
R311	1-247-883-00	CARBON	150K	5%	1/4W
R312	1-247-883-00	CARBON	150K	5%	1/4W
R313	1-249-437-11	CARBON	47K	5%	1/4W
R314	1-249-437-11	CARBON	47K	5%	1/4W
R315	1-249-437-11	CARBON	47K	5%	1/4W
R316	1-247-878-00	CARBON	91K	5%	1/4W
R317	1-247-878-00	CARBON	91K	5%	1/4W
R318	1-249-421-11	CARBON	2.2K	5%	1/4W F
R319	1-249-421-11	CARBON	2.2K	5%	1/4W F
R320	1-249-426-11	CARBON	5.6K	5%	1/4W
R321	1-249-426-11	CARBON	5.6K	5%	1/4W
R322	1-249-426-11	CARBON	5.6K	5%	1/4W
R323	1-249-426-11	CARBON	5.6K	5%	1/4W
R324	1-249-427-11	CARBON	6.8K	5%	1/4W F
R325	1-249-427-11	CARBON	6.8K	5%	1/4W F
R326	1-249-405-11	CARBON	100	5%	1/4W F
R328	1-249-409-11	CARBON	220	5%	1/4W F
R329	1-249-409-11	CARBON	220	5%	1/4W F
R331	1-249-417-11	CARBON	1K	5%	1/4W F
R332	1-249-417-11	CARBON	1K	5%	1/4W F
R333	1-249-409-11	CARBON	220	5%	1/4W F
R334	1-249-409-11	CARBON	220	5%	1/4W F
R335	1-249-417-11	CARBON	1K	5%	1/4W F
R336	1-249-417-11	CARBON	1K	5%	1/4W F
R337	1-249-437-11	CARBON	47K	5%	1/4W
R338	1-249-437-11	CARBON	47K	5%	1/4W
R401	1-249-405-11	CARBON	100	5%	1/4W F
R402	1-249-422-11	CARBON	2.7K	5%	1/4W F
R403	1-249-429-11	CARBON	10K	5%	1/4W
R404	1-249-401-11	CARBON	47	5%	1/4W F
R405	1-249-409-11	CARBON	220	5%	1/4W F
R406	1-249-421-11	CARBON	2.2K	5%	1/4W F
R407	1-247-807-31	CARBON	100	5%	1/4W
R501	1-249-417-11	CARBON	1K	5%	1/4W F
R502	1-249-415-11	CARBON	680	5%	1/4W F
R503	1-249-411-11	CARBON	330	5%	1/4W
R504	1-249-411-11	CARBON	330	5%	1/4W
R505	1-249-411-11	CARBON	330	5%	1/4W
R506	1-249-411-11	CARBON	330	5%	1/4W
R507	1-247-807-31	CARBON	100	5%	1/4W
R508	1-249-411-11	CARBON	330	5%	1/4W
R509	1-249-411-11	CARBON	330	5%	1/4W
R510	1-249-411-11	CARBON	330	5%	1/4W
R511	1-249-411-11	CARBON	330	5%	1/4W
R512	1-249-411-11	CARBON	330	5%	1/4W
R513	1-249-568-11	CARBON	4.7K	5%	1/4W
R514	1-249-568-11	CARBON	4.7K	5%	1/4W
R515	1-249-568-11	CARBON	4.7K	5%	1/4W
R516	1-249-568-11	CARBON	4.7K	5%	1/4W
R517	1-249-568-11	CARBON	4.7K	5%	1/4W
R518	1-249-568-11	CARBON	4.7K	5%	1/4W
R519	1-249-568-11	CARBON	4.7K	5%	1/4W
R520	1-249-568-11	CARBON	4.7K	5%	1/4W
R521	1-249-568-11	CARBON	4.7K	5%	1/4W
R522	1-249-568-11	CARBON	4.7K	5%	1/4W
R523	1-249-568-11	CARBON	4.7K	5%	1/4W
R524	1-249-568-11	CARBON	4.7K	5%	1/4W
R525	1-249-947-11	CARBON	10K	5%	1/4W
R526	1-249-947-11	CARBON	10K	5%	1/4W
R527	1-249-947-11	CARBON	10K	5%	1/4W
R528	1-249-947-11	CARBON	10K	5%	1/4W
R529	1-249-560-91	CARBON	2.2K	5%	1/4W
R530	1-249-560-91	CARBON	2.2K	5%	1/4W
R531	1-249-560-91	CARBON	2.2K	5%	1/4W
R532	1-249-560-91	CARBON	2.2K	5%	1/4W
R533	1-249-560-91	CARBON	2.2K	5%	1/4W
R534	1-249-560-91	CARBON	2.2K	5%	1/4W
R535	1-249-560-91	CARBON	2.2K	5%	1/4W
R536	1-249-560-91	CARBON	2.2K	5%	1/4W
R537	1-249-556-11	CARBON	1.5K	5%	1/4W
R538	1-249-556-11	CARBON	1.5K	5%	1/4W
R539	1-249-556-11	CARBON	1.5K	5%	1/4W
R540	1-249-556-11	CARBON	1.5K	5%	1/4W
R541	1-249-162-11	CARBON	10	5%	1/3W
R542	1-249-162-11	CARBON	10	5%	1/3W
R543	1-249-182-11	CARBON	68	5%	1/3W
R544	1-249-182-11	CARBON	68	5%	1/3W
R545	1-249-417-11	CARBON	1K	5%	1/4W F
R546	1-249-417-11	CARBON	1K	5%	1/4W F
R547	1-249-437-11	CARBON	47K	5%	1/4W
R548	1-249-417-11	CARBON	1K	5%	1/4W F
R549	1-249-437-11	CARBON	47K	5%	1/4W
R550	1-247-807-31	CARBON	100	5%	1/4W
R551	1-247-807-31	CARBON	100	5%	1/4W
R552	1-247-807-31	CARBON	100	5%	1/4W
R553	1-247-807-31	CARBON	100	5%	1/4W
R601	1-249-429-11	CARBON	10K	5%	1/4W
R602	1-249-433-11	CARBON	22K	5%	1/4W
R603	1-249-433-11	CARBON	22K	5%	1/4W
R604	1-249-433-11	CARBON	22K	5%	1/4W
R605	1-249-429-11	CARBON	10K	5%	1/4W
R606	1-249-429-11	CARBON	10K	5%	1/4W
R607	1-249-413-11	CARBON	470	5%	1/4W F
R608	1-249-413-11	CARBON	470	5%	1/4W F
R609	1-249-417-11	CARBON	1K	5%	1/4W F
R610	1-249-417-11	CARBON	1K	5%	1/4W F
R611	1-249-413-11	CARBON	470	5%	1/4W F
R612	1-249-413-11	CARBON	470	5%	1/4W F
R613	1-249-413-11	CARBON	470	5%	1/4W F
R614	1-249-413-11	CARBON	470	5%	1/4W F
R615	1-249-413-11	CARBON	470	5%	1/4W F
R616	1-249-413-11	CARBON	470	5%	1/4W F
R617	1-249-413-11	CARBON	470	5%	1/4W F
R618	1-247-903-00	CARBON	1M	5%	1/4W
R619	1-249-417-11	CARBON	1K	5%	1/4W F
R620	1-249-441-11	CARBON	100K	5%	1/4W
R621	1-249-429-11	CARBON	10K	5%	1/4W

MAIN POWER

Ref. No.	Part No.	Description			Remarks
		< VARIABLE RESISTOR >			
RV201	1-241-764-11	RES, ADJ, CARBON 10K			
RV202	1-241-765-11	RES, ADJ, CARBON 22K			
RV203	1-241-764-11	RES, ADJ, CARBON 10K			
RV301	1-241-767-21	RES, ADJ, CARBON 100K			
		< RELAY >			
RY201	1-515-614-11	RELAY			
RY501	1-515-614-11	RELAY			
		< ENCAPSULATED >			
T201	1-235-126-00	ENCAPSULATED COMPONENT			
		< TERMINAL >			
TM201	1-537-488-11	TERMINAL BOARD (ANT) (ANTENNA)			
		< TEST PIN >			
* TP201	1-565-513-11	PIN, CONNECTOR 2P			
		< VIBRATOR >			
X201	1-760-549-31	VIBRATOR, CRYSTAL 4.5MHz			
X401	1-579-900-21	VIBRATOR, CRYSTAL 4.332MHz			
X501	1-781-747-11	OSCILLATOR, CRYSTAL 49.152MHz			
X601	1-579-175-11	VIBRATOR, CERAMIC 10MHz			
**********					
	A-4428-525-A	POWER BOARD, COMPLETE			
		**********			
*	4-363-146-71	HEAT SINK, V.OUT			
		< CAPACITOR >			
⚠C901	1-113-925-11	CERAMIC	0.01uF	20.00% 250V	
⚠C902	1-110-677-11	MYLAR	0.047uF	20.00% 275V	
C903	1-164-096-11	CERAMIC	0.01uF	50V	
C904	1-164-096-11	CERAMIC	0.01uF	50V	
C905	1-164-096-11	CERAMIC	0.01uF	50V	
C906	1-164-096-11	CERAMIC	0.01uF	50V	
C907	1-119-806-21	ELECT	3300uF	20.00% 25V	
C908	1-119-800-11	ELECT	100uF	20.00% 16V	
C909	1-164-159-11	CERAMIC	0.1uF	50V	
C910	1-119-800-11	ELECT	100uF	20.00% 16V	
C911	1-119-800-11	ELECT	100uF	20.00% 16V	
C912	1-119-800-11	ELECT	100uF	20.00% 16V	
C913	1-119-806-21	ELECT	3300uF	20.00% 25V	
C914	1-119-800-11	ELECT	100uF	20.00% 16V	
C915	1-119-795-21	ELECT	3300uF	20.00% 16V	
C916	1-119-800-11	ELECT	100uF	20.00% 16V	
C918	1-119-820-11	ELECT	1uF	20% 50V	
C919	1-119-817-11	ELECT	0.22uF	20.00% 50V	
C920	1-119-824-11	ELECT MELF	10uF	20% 50V	
C921	1-164-159-11	CERAMIC	0.1uF	50V	
C922	1-164-159-11	CERAMIC	0.1uF	50V	
C923	1-161-494-00	CERAMIC	0.022uF	25V	
C924	1-161-494-00	CERAMIC	0.022uF	25V	
C925	1-128-874-51	ELECT	330uF	20% 63V	
C926	1-128-860-11	ELECT	47uF	20% 50V	

Ref. No.	Part No.	Description			Remarks
C927	1-128-860-11	ELECT	47uF	20% 50V	
C928	1-119-800-11	ELECT	100uF	20.00% 16V	
C929	1-119-806-21	ELECT	3300uF	20.00% 25V	
		< CONNECTOR >			
CN902	1-766-202-11	SOCKET, CONNECTOR PIN 14P			
CN903	1-766-201-11	SOCKET, CONNECTOR PIN 11P			
CN904	1-691-769-21	PLUG (MICRO CONNECTOR) 7P			
CN905	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
CN906	1-564-321-00	PIN, CONNECTOR 2P			
* CN907	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
CN908	1-564-321-00	PIN, CONNECTOR 2P			
		< DIODE >			
D901	8-719-210-21	DIODE 11EQS04-TA2B			
D902	8-719-210-21	DIODE 11EQS04-TA2B			
D903	8-719-210-21	DIODE 11EQS04-TA2B			
D904	8-719-210-21	DIODE 11EQS04-TA2B			
D905	8-719-510-53	DIODE RBV-402-01			
D906	8-719-510-53	DIODE RBV-402-01			
D909	8-719-200-77	DIODE 10E2N-TA2B			
D910	8-719-200-77	DIODE 10E2N-TA2B			
D911	8-719-024-99	DIODE 11ES2-NTA2B			
D912	8-719-118-66	DIODE RD6.2F-T7B2			
D913	8-719-986-70	DIODE HZS36-1LTA			
D914	8-719-911-19	DIODE 1SS133T-72			
D919	8-719-911-19	DIODE 1SS133T-72			
		< GROUND >			
EB1	1-537-770-21	TERMINAL BOARD, GROUND			
		< IC >			
IC901	8-759-394-35	IC BA12T			
IC902	8-749-920-58	IC SI-3090CA			
IC903	8-759-245-86	IC M5F7912L			
IC905	8-759-333-83	IC NJM2103D			
IC906	8-759-450-47	IC BA05T			
		< TRANSISTOR >			
Q901	8-729-030-02	TRANSISTOR	DTC144ESA-TP		
Q902	8-729-141-83	TRANSISTOR	2SB1375		
Q903	8-729-141-83	TRANSISTOR	2SB1375		
Q904	8-729-030-02	TRANSISTOR	DTC144ESA-TP		
Q905	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q906	8-729-029-56	TRANSISTOR	DTA144ESA-TP		
Q907	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q908	8-729-141-83	TRANSISTOR	2SB1375		
Q909	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q910	8-729-209-15	TRANSISTOR	2SD2012		
Q911	8-729-030-02	TRANSISTOR	DTC144ESA-TP		
Q912	8-729-140-97	TRANSISTOR	2SB734-T-34		
Q913	8-729-119-76	TRANSISTOR	2SA1115TP-EF		
		< RESISTOR >			
R901	1-249-421-11	CARBON	2.2K	5% 1/4W F	
R903	1-249-421-11	CARBON	2.2K	5% 1/4W F	
R904	1-249-417-11	CARBON	1K	5% 1/4W F	
R905	1-249-421-11	CARBON	2.2K	5% 1/4W F	
R906	1-249-417-11	CARBON	1K	5% 1/4W F	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
R907	1-249-421-11	CARBON	2.2K	5%	1/4W F
R908	1-249-415-11	CARBON	680	5%	1/4W F
R909	1-249-435-11	CARBON	33K	5%	1/4W
R910	1-249-429-11	CARBON	10K	5%	1/4W
R911	1-249-421-11	CARBON	2.2K	5%	1/4W F
R912	1-249-429-11	CARBON	10K	5%	1/4W
R913	1-249-425-11	CARBON	4.7K	5%	1/4W F
R915	1-249-417-11	CARBON	1K	5%	1/4W F
R916	1-249-424-11	CARBON	3.9K	5%	1/4W F
R917	1-247-843-11	CARBON	3.3K	5%	1/4W
R918	1-249-417-11	CARBON	1K	5%	1/4W F
R919	1-249-393-11	CARBON	10	5%	1/4W F
R920	1-249-424-11	CARBON	3.9K	5%	1/4W F
R921	1-249-441-11	CARBON	100K	5%	1/4W
		< TRANSFORMER >			
T902	1-424-485-11	FILTER, LINE			

****

		MISCELLANEOUS
		**********
17	1-792-185-11	WIRE (FLAT TYPE) (15 CORE)
⚠61	1-575-651-21	CORD, POWER

****

		ACCESSORIES & PACKING MATERIALS
		**********
	1-418-808-11	REMOTE COMMANDER (RM-S337)
	1-501-721-11	ANTENNA (LOOP)
	1-501-804-11	ANTENNA (FM)
	1-590-925-31	CORD, CONNECTION
	1-793-184-21	CONNECTOR (F TYPE ADAPTOR)
	4-228-705-11	MANUAL, INSTRUCTION (ENGLISH/FRENCH/GERMAN/SPANISH)
	4-228-705-21	MANUAL, INSTRUCTION (DUTCH/SWEDISH/ITALIAN/PORTUGUESE)
	4-981-643-01	COVER, BATTERY (for RM-S337)

****

Ref. No.	Part No.	Description	Remarks
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-134-19	SCREW +P 2.6X8	TYPE2 NON-SLIT
#2	7-685-548-19	SCREW +BTP	3X12 TYPE2 N-S
#3	7-685-646-79	SCREW +BVTP	3X8 TYPE2 N-S
#4	7-685-871-01	SCREW +BVTT	3X6 (S)
#5	7-685-872-09	SCREW +BVTT	3X8 (S)
#6	7-685-885-09	SCREW +BVTT	4X16 (S)

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Replace only with part number specified.

9-929-088-11

Sony Corporation
Home Audio Division Company

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